S Librae

$15^h\,13^m\,4^s$ (1855.0) $-19^\circ\,51'.7$

Max. = 2 405 692^d (17. Jun. 1874) + 192^d.1 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.4	7.3	$-1^m\,29^s$	+50'.5		24	49	11.0		$+0^m\,37^s$	+ 3'.3	
2	8	8.0	8.3	+1 49	+35.6		25	49	11.1		−0 31	− 4.8	
3	9	8.1	8.1	−1 36	−28.1		26	52	11.3		+0 41	+ 5.7	
4	14	8.4	8.9	+2 19	+37.8		27	54	11.4		−0 34	− 9.9	
5	15	8.5	9.0	−1 56	+26.4		28	56	11.6		+0 12	− 6.7	
6	15	8.5	8.6	+2 45	−27.4		29	56	11.6		+0 53	+14.7	
7	16	8.6	9.2	+1 59	+39.1		30	60	11.9		+0 7	+ 7.0	
8	20	8.9	9.1	+1 9	−19.0		31	61	11.9		+0 50	− 5.7	
9	24	9.2	9.3	+0 13	−15.0		32	62	12.0		−0 5	− 8.4	
10	24	9.2	9.3	−0 19	− 3.6		33	62	12.0		−0 43	+ 7.2	
11	25	9.3	9.1	+1 4	−20.2		34	65	12.2		+0 5	+ 2.5	Sch. 12 . 13^M.
12	26	9.4	9.5	+1 18	− 4.2		35	65	12.2		+0 7	− 7.8	
13	28	9.5	9.2	+0 53	+20.1		36	66	12.3		−0 21	− 0.9	
14	29	9.6	9.5	+1 20	+23.1		37	67	12.4		+0 36	− 1.3	
15	31	9.7	9.8	0 0	+29.9		38	68	12.5		−0 39	− 0.7	
16	31	9.7	9.5	−0 12	− 6.6		39	68	12.5		−0 15	+ 1.9	
17	31	9.7	9.5	+0 15	−16.8		40	69	12.5		−0 2	+ 2.2	Sch. 13^M.
18	32	9.8	9.4	−0 23	−22.5		41	71	12.7		+0 14	− 9.3	
19	35	10.0	9.8	+0 31	+ 9.4		42	72	12.7		+0 52	−12.7	
20	36	10.1	9.7	−0 56	− 6.9		43	74	12.9		−0 5	− 1.3	
21	37	10.2	9.4	+2 29	+32.3		44	75	13.0		−0 36	− 3.6	
22	44	10.7		+0 40	+10.0		45	82	13.5		−0 37	−11.1	
23	45	10.8		+0 19	−10.5								

$$M = 8.9 + 0.074\,(G - 19.9).$$

5644

Z Librae

$15^h\,38^m\,5^s$ (1855.0) $-20^0\,40'.1$

Max. = 2 407 109^d (4. Maii 1878) + 295^d E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.8	7.8	$+1^m\ 0^s$	− 6'.6		16	50	10.5		$-0^m\,55^s$	− 6'.5	
2	17	8.7	8.8	+0 37	−24.5		17	51	10.5		+0 12	+ 8.9	
3	19	8.8	9.1	+0 24	−12.5		18	52	10.6		−0 46	+ 3.1	
4	25	9.2	9.3	+1 12	−23.6		19	53	10.7		+0 16	+ 1.4	
5	28	9.3	9.3	+0 15	−16.4		20	54	10.7		−0 37	+ 4.3	
6	31	9.5	9.3	−0 10	+ 9.1		21	56	10.8		−0 39	+12.4	
7	32	9.5	9.6	+1 41	+11.3		22	58	10.9		+0 43	+13.9	
8	34	9.6	9.5	−0 41	+23.8		23	60	11 0		−1 0	− 2.9	
9	37	9.8	9.8	−1 33	− 9.5		24	61	11.1		+0 26	+ 6.7	
10	39	9.9		−1 36	− 3.2		25	66	11.3		−0 49	−12.5	
11	40	9 9	9.7	−0 10	− 0.2	*	26	66	11.3		+0 22	+ 5.2	
12	43	10.1	10	+0 39	−13.9		27	68	11.5		+0 29	− 1.8	
13	44	10.1		−0 5	+ 3.2	*	28	71	11.6		+0 8	+ 8.2	Duplex.
14	47	10.3		−0 13	− 1.1								
15	49	10.4		+0 20	+ 1.4								

* 11, Vide notam erroneam in Ch. III.

$$M = 9.3 + 0.054\ (G - 27.9).$$

V Virginis

$13^h\,20^m\,19^s$ (1855.0) $-2^\circ\,25'.2$

Max. = 2400456^d.5 (15. Februar 1860) + 250^d.5 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.0	8.0	$-1^m\,40^s$	$-29'.4$		13	57	11.4		$-1^m\,6^s$	$-5'.7$	
2	18	9.1	9.0	+1 30	+12.9		14	58	11.5		−0 34	− 0.3	
3	24	9.5	9.5	+1 44	+ 6.9		15	59	11.5		−1 1	+ 0.6	
4	26	9.6	9.5	+0 25	−29.7		16	59	11.5		+0 46	− 9.6	
5	30	9.8	9.5	−1 31	+26.4		17	60	11.6		−0 41	+ 0.9	
6	32	9.9	9.7	+0 8	−16.2		18	69	12.1		−0 4	+12.9	
7	32	9.9	10	+1 50	+22.2		19	70	12.2		−0 20	+ 5.4	
8	36	10.2	10	−0 10	+24.4		20	73	12.3		+0 46	+12.3	
9	40	10.4		−0 14	+24.4		21	75	12.4		−0 5	− 6.9	
10	43	10.6		−0 6	+14.4		W			var.	−1 46	−12.3	Vide Seriem IV
11	52	11.1		+0 57	+11.7								
12	54	11.2		−0 16	+10.2								

$M = 9.5 + 0.059\ (G - 24.8)$.

5776

X Scorpii

$16^h\,0^m\,2^s$ (1855.0) $-21°\,8'.3$

Max. = 2 406 364^d (19. Apr. 1876) + 199^d.0 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.1	8.0	$-1^m\,41^s$	−19′.2		21	51	11.1		$-0^m\,47^s$	− 0′.6	
2	2	8.2	8.2	−0 47	+ 7.5		22	53	11.2		+0 36	+11.4	
3	13	8.8	9.1	−1 43	−22.8		23	55	11.3		−0 49	− 8.7	
4	13	8.9	8.8	+0 42	−24.3		24	57	11.4		+0 1	− 3.0	
5	15	9.0	9.1	−1 32	+14.4		25	58	11.4		+0 56	− 7.2	
6	18	9.1	9.2	+2 7	− 6.9		26	61	11.6		+0 20	+ 6.0	
7	23	9.4	9.5	−1 40	+23.1		27	61	11.6		−0 38	+ 0.3	
8	23	9.4	9.5	+1 32	− 3.0		28	63	11.7		+0 54	− 5.7	
9	26	9.6	9.8	+1 38	+20.4		29	64	11.8		+0 1	+ 1.8	
10	28	9.7	9.5	−0 12	− 5.7		30	67	11.9		+0 17	− 4.2	
11	30	9.8	9.7	−1 1	−24.6		31	67	12.0		−0 9	− 6.6	
12	32	9.9	10	+1 8	+ 0.3		32	68	12.0		−0 19	− 1.5	
13	32	10.0	9.5	−0 18	+ 2.1		33	71	12.2		−0 43	0.0	
14	33	10.0	9.5	−1 57	−14.4		34	71	12.2		+0 26	− 5.4	
15	34	10.1	10	−0 36	+18.1		35	72	12.2		−0 25	− 3.0	
16	35	10.1	9.7	−1 0	− 5.4		36	73	12.3		+0 3	+11.1	
17	41	10.5		−0 31	+13.2		37	75	12.4		−0 23	+ 5.4	
18	44	10.6		+0 26	− 2.4		38	78	12.6		+0 18	+ 0.3	
19	45	10.7		+0 1	+ 7.5		39	79	12.7		−0 49	− 5.7	
20	50	11.0		+0 50	−14.7		Z			var.	−2 33	−11.8	

M = 9.2 + 0.058 (G − 19.3).

5070

Z Virginis

$14^h\,2^m\,33^s$ (1855.0) $-12^\circ\,36'.5$

Max. = 2 407 861^d (25. Maii 1880) + 306^d.5 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.7	9.0	$-0^m\,11^s$	− 2'.4		26	28	10.2	10	$+0^m\,43^s$	−12'.8	
2	5	9.0	8.8	+0 47	− 0.3		27	31	10.3	10	−0 30	+ 2.8	
3	7	9.1	9.5	−0 21	+ 0.1		28	32	10.3		−0 39	+ 0.8	
4	9	9.2	9.4	−0 29	+29.3		29	33	10.4	10	+0 28	+ 8.3	
5	11	9.3	9.5	−0 20	+28.3		30	35	10.5		+0 21	+ 6.1	
6	11	9.3	9.1	−1 33	−16.0		31	39	10.7		−0 42	− 9.5	
7	13	9.4	9.5	−1 8	+ 8.8		32	39	10.7		+0 43	+13.6	
8	14	9.4	9.3	−1 32	+ 2.6		33	41	10.8		+0 56	− 0.8	
9	14	9.4	9.4	+1 24	+22.7		34	41	10.8		−0 55	+14.2	
10	15	9.5	10	+0 5	+28.9		35	44	10.9		+0 52	− 0.8	
11	15	9.5	9.5	+0 29	+10.3		36	47	11.1		−0 42	+14.5	
12	16	9.5	9.7	−1 26	+ 2.6		37	47	11.1		+1 4	−12.5	
13	17	9.6	9.7	−0 7	+20.5		38	48	11.1		+0 2	− 5.1	
14	18	9.6	9.5	−0 35	−17.7		39	50	11.2		−0 41	+ 6.5	
15	19	9.7	10	+0 37	+26.5		40	50	11.2		+0 22	− 0.8	
16	21	9.8	9.5	+0 5	+ 8.9		41	50	11.2		+0 40	−11.0	
17	21	9.8	10	−0 50	−18.5		42	52	11.3		−0 14	+12.7	
18	22	9.8	9.6	+0 47	−23.9		43	53	11.4		+0 22	− 5.0	
19	24	9 9	10	+0 27	+29.8		44	55	11.5		+0 5	+10.0	
20	24	9.9	9.9	+1 5	−20.3		45	57	11.6		+0 22	−12.5	
21	25	10.0	10	+0 13	+11.5		46	58	11.6		−0 41	− 0.2	
22	26	10.0	10	+1 9	−22.7								
23	27	10.1	10	−0 32	−18.3								
24	28	10.1	10	−0 7	+ 2.7								
25	28	10.1	10	+1 42	−23.6								

$$M = 9.5 + 0.050\ (G - 15.4).$$

4377

T Virginis

$12^h\,7^m\,10^s$ (1855.0) $-5^\circ\,13'.8$

Max. = 2400891^d (26. April 1861) + 339^d.5 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0		6.9	$-0^m\,20^s$	+19′.1	S. 6^M.6.	21	62	10.5		$-0^m\,8^s$	+ 1′.7	Sch. 11^M.
2	4	8.0	8.1	+1 46	+11.3		22	67	10.7		+0 18	− 7.9	
3	6	8.1	8.0	+1 16	− 7.9		23	69	10.8		−0 11	−14.2	
4	11	8.3	8.5	+0 57	+ 5.9		24	70	10.9		+0 15	− 6.4	
5	33	9.2	9.1	−0 48	−28.0		25	73	11.0		+0 13	+ 1.7	Sch. 11.12^M.
6	36	9.4	9.5	+1 40	+22.1		26	76	11.1		−0 51	− 2.8	
7	37	9.4	9.4	+1 51	+20.3		27	77	11.2		+0 24	+15.2	
8	40	9.5	9.5	+0 28	+11.3		28	78	11.2		+0 48	− 6.7	
9	43	9.7	9.5	+1 12	−22.0		29	78	11.2		−0 57	+ 2.6	
10	43	9.7	9.5	+1 39	− 9.4		30	79	11.3		+0 2	+ 1.8	Sch. 12^M.
11	43	9.7	9.5	−1 2	+26.6		31	80	11.3		−0 3	+ 4.4	Sch. 11.12^M.
12	45	9.8	9.5	−1 7	+29.9		32	81	11.3		−0 51	− 0.1	
13	46	9.8	9.8	+1 15	−19.6		33	82	11.4		+0 12	−14.5	
14	47	9.8	10	+1 4	+ 2.0		34	84	11.5		−0 42	+11.6	
15	47	9.9	9.5	−0 50	−14.5		35	86	11.6		−0 51	+ 2.9	
16	49	9.9	9.5	−1 41	+29.3		36	92	11.8		−0 33	+ 0.2	
17	50	10.0	10	−0 23	−27.4								
18	54	10.2		+0 47	−14.2								
19	56	10.2		+0 39	+ 2.9								
20	58	10.3		+0 25	+ 8.6								

$M = 9.0 + 0.044\ (G - 27.3)$.

5761

Z Scorpii

$15^h\,57^m\,29^s$ (1855.0) $-21°\,20'.1$

Max. = 2 405 292^d (13. Maii 1873) + 370^d E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.0	7.5	$-0^m\,17^s$	− 6′.3		21	61	10.5		$0^m\,0^s$	+11′.1	
2	1	8.1	8.0	+0 50	− 7.9		22	65	10.7		+0 37	+15.0	
3	4	8.2	8.2	+1 45	+19.0		23	70	10.9		−0 4	− 1.2	Duplex.
4	9	8.4	8.7	−1 56	−11.1		24	72	11.0		−0 47	+ 8.4	
5	12	8.5	8.8	+1 16	−19.8		25	74	11.1		−0 32	− 8.4	
6	19	8.8	8.8	−1 24	+23.4		26	77	11.2		−0 7	+ 6.1	
7	20	8.8	9.1	+0 48	−11.2		27	78	11.2		+0 26	+ 3.6	
8	23	9.0	9.1	+1 0	+26.1		28	79	11.3		−0 3	−10.2	
9	24	9.0	9.1	+0 30	+29.3		29	80	11.3		+0 1	− 7.5	
10	24	9.0	9.0	+0 9	+ 9.7		30	81	11.3		+0 45	+13.2	
11	30	9.3	9.3	+0 35	−25.5		31	83	11.4		+0 41	+ 5.7	
12	33	9.4	9.3	−0 50	−17.8		32	83	11.4		−0 36	−11.8	
13	36	9.5	9.6	−0 52	− 0.6		33	85	11.5		+0 22	− 7.8	
14	42	9.7	9.6	−1 51	− 4.2		34	86	11.6		+0 32	+11.4	
15	44	9.8	9.7	+1 31	−13.3		35	87	11.6		−0 55	− 9.9	
16	44	9.9	9.5	+0 35	− 2.8		36	88	11.7		0 0	+ 6.6	
17	48	10.0		−0 16	−13.8		37	94	11.9		−0 50	+ 6.3	
18	52	10.1	9.7	+1 32	+ 6.6		X			var.	+2 33	+11.8	
19	58	10.4		−0 15	+ 1.3								
20	59	10.5		−0 21	+ 9.9								

M = 9.0 + 0.041 (G − 23.7).

5583

X Librae

$15^h\,27^m\,50^s$ (1855.0) $-20^\circ\,40'.8$

Max. = 2407 183^d (17. Jul. 1878) + 163^d.6 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1			5.8	$+2^m\,3^s$	+ 8'.3	S. $6^M_{.}5$.	23	42	10.3		$+0^m\,34^s$	+ 3'.9	
2	0	8.4	8.4	−1 1	+ 9.0		24	50	10.7		−0 29	+ 7.8	
3	5	8.6	8.8	+1 59	−12.9		25	51	10.8		+0 4	+11.5	
4	6	8.7	8.8	+1 5	−16.0		26	54	10.9		+0 33	+12.6	
5	11	8.9	9.0	−1 13	+ 5.8		27	55	10.9		+0 24	− 1.3	
6	14	9.0	8.8	+0 57	− 6.7		28	57	11.0		+0 12	+12.0	
7	17	9.2	9.0	−0 6	+26.8		29	57	11.1		−0 39	+15.4	
8	21	9.4	9.6	−0 37	− 6.0		30	58	11.1		+1 2	+10.0	
9	25	9.6	9.5	+1 23	+ 5.5		31	60	11.2		+0 59	− 6.3	
10	26	9.6	9.9	−0 23	− 6.7		32	61	11.2		−0 47	+12.4	
11	27	9.6	9.8	−0 21	+ 8.4		33	61	11.3		+0 13	+ 9.0	
12	27	9.6	9.4	+1 30	−14.7		34	62	11.3		+1 2	− 3.9	
13	30	9.8	9.8	+1 47	+19.4		35	63	11.3		−0 31	+ 4.0	
14	30	9.8	9.9	−0 35	−11.2		36	65	11.4		−0 14	+15.6	
15	32	9.9	10	−0 57	−11.8		37	65	11.4		−0 5	−10.8	
16	33	9.9	9.5	−1 51	+12.9		38	69	11.6		+0 33	− 9.3	
17	34	10.0	10	−0 21	+ 4.9		39	69	11.6		+0 55	+12.6	
18	36	10.0	9.9	−0 17	−11.1		40	71	11.7		+0 12	− 0.9	
19	36	10.1	9.8	+0 14	+ 2.8		41	72	11.7		+0 27	− 6.9	
20	37	10.1	10	−1 51	+14.7		42	73	11.8		−0 18	+14.1	
21	39	10.2		+0 37	− 2.4		43	73	11.8		−0 8	− 6.0	
22	40	10.3	10	+0 29	+15.8		44	74	11.9		−0 4	+ 5.4	

M = 9.0 + 0.047 (G − 13.4).

5593

W Librae

$15^h\,29^m\,40^s$ (1855.0) $-15^0\,41'.5$

Max. = 2 407 132^d (27. Maii 1878) + 206^d E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.5	8.5	$-1^m\,51^s$	+12'.3		21	49	10.3		$+1^m\,3^s$	+10'.5	
2	9	8.8	9.1	−0 18	+26.7		22	52	10.4		+0 47	+ 4.2	
3	17	9.1	9.2	−0 3	+27.6		23	54	10.5		−0 43	+ 3.6	
4	18	9.2	9.2	+1 28	−26.0		24	54	10 5		+1 0	+ 9.9	
5	21	9.3	9.2	+0 41	−22.8		25	56	10.6		+0 11	+ 6.6	
6	22	9.3	9.4	+1 19	+ 2.1		26	57	10.6		+0 51	− 2.4	
7	25	9.5	9.5	+1 13	+12.9		27	59	10.7		+0 19	+ 3.0	
8	26	9.5	9.5	+0 10	+23.4		28	59	10.7		−0 32	+ 7.8	
9	26	9.5	9.4	+0 20	−22.5		29	61	10 8		+1 0	− 4.2	
10	29	9.6	9.8	−0 18	+ 3.9		30	63	10.8		+0 5	− 4.8	
11	29	9.6		−0 21	−17.4		31	63	10.8		−0 4	+10.5	
12	31	9.7	9.6	+0 48	−19.8		32	63	10.8		+0 48	+ 7.5	
13	32	9.7	9.6	+1 0	+14.7		33	66	11.0		−0 10	−10.6	
14	36	9.8	9.5	−1 54	−29.3		34	67	11.0		−0 15	+11.7	
15	36	9.8		−1 2	− 1.8		35	69	11.1		−0 6	−10.8	
16	36	9.8		+1 1	− 2.7		36	69	11.1		−0 9	+13.5	
17	39	9.9		−0 46	+ 4.5		37	71	11.1		+0 14	0.0	
18	42	10.1		−0 59	+ 6.3		38	71	11.1		−0 10	− 7.2	
19	42	10.1		+0 42	+ 9.6		39	77	11.3		+0 11	− 2.1	
20	49	10.3		−0 9	− 8.8		40	81	11.5		−0 4	0.0	

$M = 9.3 + 0.037\ (G - 20.9)$.

5037

RR Virginis

$13^h\,57^m\,12^s$ (1855.0) $-8^\circ\,30'.0$

Max. = 2 407 483 (13. Maii 1879) + 217 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0		5.0	$+1^m\,50^s$	− 7′.2	S. $6^M.1$; 95 Virg.	18	72	10.8		$-0^m\,25^s$	+11′.7	
2	7		6.8	+1 25	+18.0	S. 6.7; 94 Virg.	19	74	10.9		+0 26	+10.5	
3	10		6.5	−0 32	− 3.6	S. 6.7.	20	74	10.9		+0 4	− 6.9	
4	25	7.7	8.0	+0 18	+ 8.7		21	77	11.1		+0 2	+14.1	
5	30	8.0	8.0	−0 34	−19.8		22	80	11.3		−0 48	+10.2	
6	36	8.4	8.5	−1 53	−18.6		23	82	11.4		+0 34	−10.2	
7	42	8.8	9.2	−0 13	+26.7		24	84	11.6		+0 20	+ 2.1	
8	46	9.0	8.8	−0 5	−24.0		25	87	11.7		+0 6	− 9.3	
9	50	9.3	9.4	−1 6	+10.5		26	90	11.9		−0 6	− 2.1	
10	54	9.5	9.5	+0 47	− 1.8		27	90	12.0		−0 9	+11.7	
11	57	9.8	10	−1 58	− 2.7		28	92	12.0		−0 22	+ 2.4	
12	59	9.9	9.8	+1 53	− 3.9		29	93	12.1		−0 22	− 3.3	
13	60	10.0	9.5	−0 47	+ 8.4		30	96	12.3		−0 17	− 3.3	
14	63	10.2	9.9	+0 59	− 7.6		31	97	12.4		−0 15	− 9.6	
15	68	10.5		+0 28	+ 2.4		32	97	12.4		−0 8	− 6.6	
16	68	10.5		+0 28	+13.8		33	100	12.6		+0 18	+ 1.5	
17	72	10.7		−0 3	−15.9								

$M = 8.4 + 0.065\ (G - 36.0)$.

4492

Y Virginis

$12^h\,26^m\,25^s$ (1855.0) $-3^0\,37'.3$

Max. = 2 408 880^d (10. Mart. 1883) + 218^d.8 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.2	8.0	$+0^m18^s$	− 1'.4		13	41	10.8		$+0^m40^s$	+14'.0	
2	5	8.5	8.5	−1 39	+16.2		14	44	10.9		+0 58	+17.2	
3	8	8.7	8.7	+1 29	+21.6		15	47	11.1		+0 58	−13.7	
4	16	9.2	9.2	+0 59	− 0.1		16	47	11.1		−0 51	+16.9	
5	19	9.4	9.3	+0 57	−26.6		17	50	11.3		+0 17	−14.0	
6	20	9.5	9.4	−0 35	+ 6.0		18	53	11.5		+0 6	+ 2.3	Ch. 11^M
7	24	9.7	9.7	+1 49	+ 2.7		19	59	11.9		−1 1	− 9.2	
8	27	9.9		+0 32	− 0.8		20	63	12.1		+0 8	− 7.1	
9	29	10.0	10	+1 48	+22.7		21	69	12.6		−0 6	−14.0	
10	31	10.2	10	−1 11	+23.6								
11	34	10.3		−0 31	−10.4								
12	38	10.5		−0 17	− 7.7								

* 21 non invenitur in Charta Paris. 38 vel Clinton. 16.

$$M = 9.0 + 0.063\ (G - 13.0).$$

5795

W Scorpii

$16^h\,3^m\,18^s$ (1855.0) $-19^\circ\,45'.3$

Max. = 2 406 401^d (26. Maii 1876) + 222^d.3 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.3	8.3	$-2^m\,11^s$	$-28'.4$		21	88	11.4		$+0^m\,4^s$	$-\ 9'.9$	Duplex.
2	8	8.6	8.9	−0 49	−15.6		22	89	11.5		−0 46	−10.8	
3	11	8.7	8.7	−0 51	+ 8.1		23	89	11.5		+0 39	+10.2	
4	34	9.5	9.5	−1 28	+12.9		24	91	11.5		+0 42	+12.9	
5	39	9.7	10	−0 32	+ 4.2		25	93	11.6		+0 17	−13.2	
6	42	9.8	9.8	+0 11	− 2.4		26	94	11.6		+0 48	+ 5.7	
7	45	9.9	9.7	−0 7	+ 0.9		27	96	11.7		+0 46	+11.1	
8	48	10.0	9.5	−1 36	−26.6		28	96	11.7		+0 23	− 2.7	
9	52	10.2	9.6	−1 10	−15.9		29	99	11.8		+0 40	+10.2	
10	57	10.3		+0 58	−14.1		30	102	11.9		−0 36	+ 0.3	
11	63	10.5		−0 9	− 7.5		31	103	11.9		+0 55	+ 7.8	
12	67	10.7		−0 36	+ 7.2		32	103	12.0		+0 52	+ 6.0	
13	68	10.7		+0 29	+13.8		33	103	12.0		+0 54	− 0.9	
14	72	10.9		−1 2	− 7.5		34	104	12.0		0 0	+ 8.7	
15	75	11.0		+0 16	+ 5.4		35	107	12.1		−0 27	− 0.2	
16	78	11.1		−0 42	− 4.8		36	107	12.1		+0 55	− 0.3	
17	79	11.1		+0 17	−10.8		37	110	12.2		+0 38	−11.4	
18	81	11.2		−0 27	+ 8.4		38	113	12.3		+0 9	+ 3.0	
19	85	11.3		+0 46	+ 1.2								
20	85	11.3		−1 2	−12.3								

$M = 9.2 + 0.035\ (G - 25.3)$.

7907

U Aquarii

$21^h\,55^m\,24^s$ (1855.0) **$-17°\,19'.5$**

Max. = 2 406 105^d (4. Aug. 1875) + 258^d E?

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1			6.8	$-0^m\,54^s$	$-20'.4$	Dupl. Fl. 29.*	16	32	10.5		$-0^m\,11^s$	$+12'.6$	
2	0	8.1	8.0	+0 53	+27.7		17	36	10.8		−0 31	− 3.0	
3	4	8.4	8.5	−1 30	− 8.9		18	36	10.9		−0 50	+ 5.1	
4	7	8.7	8.8	−0 51	+26.6		19	40	11.2		−0 1	− 2.1	
5	10	8.9	9.0	+0 2	+27.2		20	43	11.4		−0 48	+ 0.2	
6	12	9.1	9.1	−2 3	+24.8		21	47	11.7		−0 33	− 6.6	
7	14	9.2	9.1	−0 34	+11.8		22	47	11.7		−0 29	+ 4.9	
8	15	9.3	9.2	+0 11	−27.1		23	48	11.8		+0 48	−0 .3	
9	18	9.5	9.5	+0 13	−16.9		24	49	11.9		−0 53	− 4.0	
10	18	9.5	9.3	+0 15	+ 9.9		25	56	12.4		+0 15	− 6.2	
11	20	9.7	9.9	+1 4	−14.4		26	61	12.8		+0 14	− 0.6	
12	22	9.8	9.9	+1 7	−10.8		27	66	13.2		+0 26	+ 1.9	
13	24	9.9	9.8	−1 57	+23.1								
14	24	10.0	9.8	+1 43	−13.0								
15	25	10.1	10	+0 25	− 6.4								

* Σ^I 2654 c. g., U. A. $7\frac{1}{2}^M$, 7^M in ordine A. R.

$$M = 9.0 + 0.077\,(G - 24.2).$$

5830 et 5831

R & S Scorpii

$16^h\,9^m\,2^s$ (1855.0) $-22^\circ\,33'.5$

R Max. = 2 401 590^d.5 (25. Mart. 1863) + 224^d.5 E (Inaequalitas periodica),

S Max. = 2 392 162^d.4 (1. Jun. 1837) + 176^d.7 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.9	7.3	+0^{m}48^s	−21′.6	CD. 7^M.3	26	26	10.8		+0^{m}30^s	− 1′.6	CD. 10^M
2	6	8.2	8.6	−1 21	−14.1	„ 8.8	27	68	11.0		+0 41	+ 8.1	
3	10	8.3	8.0	−0 25	− 0.3	„ 8.3	28	69	11.1		−0 32	−13.5	
4	12	8.4	8.5	−0 47	−11.2	„ 8.5	29	69	11.1		+0 53	− 1.5	„ 10
5	16	8.6	9.0	+0 3	+25.5	„ 9.0	30	69	11.1		−0 48	+ 8.1	„ 10
6	17	8.7	8.8	−0 14	−25.3	„ 8.7	31	72	11.2		−0 23	−10.2	
7	21	8.8	8.9	+1 12	+ 9.6	„ 9.1	32	73	11.2		+0 14	+ 8.7	„ 10
8	23	8.9	8.7	−1 57	+ 7.2	„ 8.7	33	73	11.2		+0 43	−12.3	
9	23	8.9	9.1	−1 21	−11.7	„ 9.3	34	75	11.3		+0 34	−13.6	
10	26	9.1	9.2	+1 59	+28.7	„ 9.1	35	76	11.4		−0 14	+ 6.3	
11	28	9.2	9.1	−1 41	−13.8	„ 9.3	36	77	11.4		+0 25	−14.7	
12	29	9.2	9.2	+0 30	+13.0	„ 9.2	37	78	11.5		+0 25	− 3.9	
13	29	9.2	9.2	+0 39	−21.9	„ 9.5	38	79	11.5		+0 49	+ 3.3	
14	30	9.3	9.2	+0 37	−13.4	„ 9.1	39	80	11.6		−0 10	−11.4	
15	33	9.4	9.2	+0 10	+ 1.3	„ 9.3*	40	81	11.6		+0 10	+ 4.9	
16	34	9.5		+0 23	−28.8	„ 9.5	41	84	11.8		−0 48	+ 3.6	
17	36	9.6	9.2	−0 9	− 8.4	„ 9.4	42	84	11.8		+0 39	− 8.7	
18	39	9.7	9.3	−0 12	−16.8	„ 9.5	43	85	11.8		+0 15	+10.2	
19	40	9.7		−1 10	−30.2	„ 9.5	44	89	12.0		−0 38	+ 8.0	
20	41	9.8	9.7	+1 15	+ 2.4	„ 9.6	T			Nova	−0 37	− 3.2	Cumulus**.
21	41	9.8		+2 1	−27.8	„ 9.5	R			var.	−0 1	− 1.5	
22	43	9.9	9.8	+0 3	+20.1	„ 9.9	S			var.	+0 1	+ 1.5	
23	45	10.0	9.8	−0 41	+ 5.7	„ 9.7							
24	58	10.6		+0 56	− 9.0	„ 10							
25	61	10.7		−0 55	−14.7	„ 9.7							

* 15, CGC. 22 071 dpl.

** Cumulus: Messier 80, N. G. C. 6093. Nova (1860) + 0^s.29, + 2″.7 a centro (Sch. II, 84).

M = 8.8 + 0.046 (G − 19.6).

6132

R Ophiuchi

$16^h\,59^m\,27^s$ (1855.0) $-15^\circ\,53'.7$

Max. = 2 399 507^d (11. Jul. 1857) + 302^d.7 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1			2	$+2^m\,37^s$	+21'.7	S. $2^M.5$; η Oph.	24	49	10.7		$-0^m\,24^s$	- 5'.7	
2	0	8.0	8.0	+2 26	- 4.5		25	52	10.9		−0 50	−15.0	
3	3	8.2	8.0	+2 4	−12.9		26	52	10.9		+0 6	- 4.5	Ch. $10^M.5$.
4	10	8.5	8.9	−0 52	−20.7		27	54	11.0		−0 47	+15.9	
5	15	8.8	9.0	−0 39	−17.7		28	54	11.0		+0 2	- 6.0	Ch. $10^M.5$ (±)
6	15	8.8	8.8	+1 37	+15.6		29	57	11.1		−0 22	- 6.0	
7	18	9.0	9.0	+0 11	+19.4		30	58	11.2		−0 51	−12.7	
8	20	9.1	9:3	+0 32	−27.0		31	62	11.4		−0 1	+ 3.6	
9	23	9.2	9.5	−1 9	+ 6.3		32	63	11.5		+0 40	- 3.3	Cumulus.
10	24	9.3	9.4	−0 43	- 4.5		33	64	11.5		+1 4	+ 6.6	
11	25	9.4	9.1	+1 48	+ 8.7		34	67	11.7		+0 22	- 5.7	
12	27	9.5	9.5	−1 9	−17.4		35	69	11.8		−0 24	+ 3.3	
13	28	9.5		−0 57	+23.1		36	72	12.0		−0 14	- 0.3	
14	31	9.7	9.5	−0 43	−27.3		37	73	12.0		+0 26	−12.0	
15	33	9.8	9.7	−0 47	−24.3		38	77	12.2		+0 51	−11.5	
16	33	9.8		−1 0	+22.8		39	77	12.2		−0 11	- 5.4	
17	34	9.9	10	+0 22	+27.0		40	78	12.3		+0 5	- 0.6	
18	35	9.9	9.5	+1 36	+28.8		41	81	12.4		+0 46	−11.7	
19	36	10.0	9.5	+1 15	- 2.1		42	81	12.5		−0 12	−10.2	
20	40	10.2		−0 54	+14.7		43	86	12.7		+0 29	- 3.9	
21	41	10.3	10	−0 24	+15.2		44	88	12.9		+0 28	+ 0.3	
22	43	10.4		−0 56	- 1.0		45	94	13.2		−0 2	+ 7.2	
23	46	10.6		−0 36	+ 5.8								

$$M = 9.4 + 0.055\ (G - 25.4).$$

7733

Y Capricorni

$21^h\,26^m\,27^s$ (1855.0) $-14^\circ\,36'.9$

Max. = 2 409 790^d (5. Sept. 1885) + 206^d E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.9	8.0	$-0^m\,6^s$	+29'.3		23	79	9.9	9.3	$-1^m\,43^s$	−13'.1	
2	29	8.6	8.8	+0 21	+ 4.5		24	89	10.2	10	+1 23	−24.8	
3	34	8.8	8.7	+2 2	− 0.3		25	87	10.2		−0 43	− 3.6	
4	40	8.9	9.1	−0 36	+27.5		26	90	10.3		+0 45	−12.2	
5	42	9.0	8.8	−1 43	−29.3		27	93	10.3		−1 0	+11.7	
6	43	9.0	9.0	+1 48	+ 6.6		28	94	10.4		+0 6	− 6.9	
7	45	9.1	9.3	−1 16	+26.6		29	95	10.4		−0 29	+ 1.5	
8	46	9.1	9.0	−2 0	−16.1		30	96	10.4		−0 57	−12.8	
9	48	9.1	9.3	+0 4	+20.3		31	96	10.4		−0 16	− 0.3	
10	52	9.2	9.5	+1 21	− 5.1		32	96	10.4		−0 32	+ 1.8	
11	53	9.3	9.3	−0 20	−22.7		33	96	10.4		−0 35	+ 6.0	
12	54	9.3	9.3	−0 37	+15.0		34	98	10.5		−0 59	−11.3	
13	56	9.3	9.4	+1 42	+17.1		35	98	10.5		+0 51	− 1.2	
14	59	9.4	9.3	+0 42	− 3.9		36	98	10.5		−0 38	+ 6.9	
15	60	9.4	9.3	+0 22	− 3.0		37	99	10.5		−0 15	+ 0.6	
16	62	9.5	9.4	−1 56	+ 9.3		38	101	10.5		−0 32	+ 5.4	
17	68	9.7	9.4	−0 40	− 6.0		39	104	10.6		−0 8	+10.8	
18	70	9.7	9.6	−0 20	− 8.1		40	107	10.7		+0 11	+ 7.5	
19	72	9.8	9.8	−1 31	−12.5		41	112	10.8		+0 21	− 1.2	
20	72	9.8	9.7	−0 19	+ 2.7		42	113	10.8		−0 12	+ 9.3	
21	73	9.8		−0 29	+15.6								
22	77	9.9	10	−1 23	+10.8								

M = 9.3 + 0.026 (G − 54.3).

8230

S Aquarii

$22^h\,49^m\,20^s$ (1855.0) $-21°\,7'.0$

Max. = $2\,400\,395^d$ (16. Dec. 1859) + $279^d.7$ E (Inaequalitas periodica).

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0		6.3	$-1^m\,36^s$	+12'.3	S. $6^M.7$	16	38	10.0	9.7	$-0^m\,51^s$	+15'.6	
2	9	7.9	7.5	+0 31	+ 3.9		17	38	10.0	10	+0 34	−11.1	
3	15	8.3	8.3	+0 23	−19.8		18	41	10.2	10	+1 6	−29.1	
4	17	8.5	8.5	−1 12	−11.4		19	46	10.5		+0 37	+12.0	
5	21	8.8	8.9	+1 48	−33.0		20	49	10.8		−0 23	−12.6	
6	27	9.2	9.3	−1 38	−26.1		21	50	10.9		−0 21	−10.8	
7	30	9.4	9.3	+2 15	−16.5		22	55	11.2		−0 30	+ 9.6	
8	30	9.4	9.4	−1 8	− 0.6		23	58	11.5		−0 1	− 8.1	
9	31	9.5	9.6	+0 55	−15.0		24	61	11.7		−0 17	− 0.3	
10	32	9.6	9.4	−1 19	+ 2.4		25	62	11.7		0 0	+ 4.5	
11	32	9.6	9.7	+0 9	− 5.4		26	64	11.9		+0 3	+ 4.8	
12	33	9.7	9.3	+1 47	−18.0		27	71	12.4		−0 44	− 2.4	
13	34	9.7	9.6	−1 15	−24.6								
14	34	9.7		−0 36	+15.0								
15	37	9.9	9.6	+1 34	−29.4								

$M = 9.0 + 0.073\ (G - 24.3)$.

S Ceti

$0^h 16^m 41^s$ (1855.0) $-10° 7'.9$

Max. = 2 405 165^d (6. Jan. 1873) + 320^d.2 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.6	7.2	+3^m 5^s	−32'.8		18	37	10.2		−0^m 7^s	+14'.8	
2	3	7.9	7.8	−1 17	+ 6.2		19	37	10.3	10	−0 15	+23.1	
3	5	8.0	8.0	−1 21	−17.8		20	41	10.5	9.8	−0 9	−24.6	
4	9	8.3	8.5	−1 15	+ 3.0		21	44	10.7		−0 9	−25.6	
5	15	8.7	8.7	−2 54	+ 5.7		22	46	10.9		+0 3	+14.4	
6	19	9.0	9.3	+0 15	+12.7		23	46	10.9		0 0	− 3.4	Ch. 12^M (?)
7	20	9.0	9.2	+1 51	−13.8		24	50	11.2		−1 2	− 2.2	
8	23	9.3	9.4	−0 16	− 8.1		25	54	11.5		+0 1	+11.1	
9	27	9.5	9.5	−0 35	+23.2		26	57	11.7		+0 36	+10.9	
10	30	9.8	9.2	−1 16	−19.1		27	60	11.9		−0 49	− 6.1	
11	32	9.9	9.5	+1 59	+ 9.5		28	64	12.2		+0 13	+10.2	
12	32	9.9		+2 2	+ 9.7		29	66	12.3		−0 35	+ 3.6	
13	34	10.1	10	+0 21	+10.2		30	69	12.5		−0 55	−13.5	
14	35	10.1	9.8	+1 30	+ 5.4		31	72	12.7		+0 33	+ 7.5	
15	35	10.1	9.4	−0 10	+20.4		32	73	12.8		−0 5	− 2.4	
16	35	10.1		−0 9	+19.8		33	77	13.1		−0 5	− 1.2	
17	37	10.2	10	−0 5	+ 8.1		34	83	13.5		+0 3	−10.2	

Ch. 12^M, − ♀ + 6' invisib.

$$M = 8.9 + 0.071\ (G - 17.8).$$

1986

T Orionis

$5^h\,28^m\,43^s$ (1855.0) $-5^\circ\,34'.5$

Variatio irregularis.

Num.	Gradus*	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1			3	$-0^m\,24^s$	$-26'.4$	S. $2^M.9$, $\iota=\Sigma 752$	31	20	9.5	9.0	$-0^m\,17^s$	$+23'.1$	Bd. $9^M.7$ N. 752
2			4.0	−0 34	+ 5.2	S. 5.1, $\theta^1=\Sigma 748$*	32	20	9.5	9.5	−0 24	−22.8	„ 9.5 „ 711
3			5.0	−0 28	+ 3.6	S. 5.6, $\theta^2=\Sigma^I 16$	33	20	9.5	9.8	−1 1	+ 9.6	„ 10.0 „ 479
4			6.7	+1 38	−27.9	S. 6.7	34	20	9.6	9.4	−1 55	−10.2	„ 9.6 „ 247
5	0	7.7	7.8	−0 24	+ 3.6		35	21	9.6	9.5	−0 19	− 4.5	„ 10.8 „ 746
6	2	7.8	7.8	+0 25	−10.2	Bd. $7^M.8$ N. 905**	36	22	9.7	9.5	−1 9	+21.6	„ 9.4 „ 438
7	3	8.0	9.0	−0 20	+12.9	„ 9.0 „ 734	37	22	9.8	9.5	−1 17	+25.5	„ 9.5 „ 398
8	4	8.1	8.2	+0 4	− 9.6	„ 8.6 „ 843	38	22	9.8	10	−0 30	+ 6.9	„ 9.8 „ 669
9	7	8.3	8.3	−0 45	+16.8	„ 9.0 „ 554	39	23	9.8	9.5	−1 36	− 8.4	„ 10.2 „ 315
10	7	8.3	8.3	−0 38	−27.6	„ 8.7 „ 590	40	23	9.8		−0 22	+ 2.1	„ 10.5 „ 724
11	8	8.4	8.3	−1 3	− 5.7	„ 8.7 „ 467	41	24	9.8	9.5	−0 59	− 4.8	„ 9.9 „ 497
12	10	8.6	9.0	−0 19	+ 3.3	„ 10.0 „ 741	42	25	10.0	9.5	+0 49	+ 8.7	„ 10.2 „ 956
13	11	8.7	9.0	+0 40	−17.7	„ 8.6 „ 935	43	26	10.1	10	−1 17	−17.4	„ 9.3 „ 401
14	12	8.8	9.0	−0 41	+ 0.6	„ 9.4 „ 570	44	26	10.1	9.5	−0 15	+16.8	„ 10.0 „ 757
15	12	8.8	9.0	−0 36	−21.6	„ 8.6 „ 613	45	27	10.2		+0 48	0.0	„ 10.5 „ 955
16	13	8.9	9.1	−1 55	− 8.1	„ 9.3 „ 246	46	27	10.2	9.5	+1 26	+26.7	„ 10.0 „ 1031
17	14	9.0	9.0	+0 48	+21.3	„ 9.3 „ 953	47	72	10.2	10	−2 0	−17.4	„ 9.4 „ 235
18	14	9.0	9.1	−0 55	− 2.1	„ 9.6 „ 505	48	28	10.3	10	−0 30	+19.5	„ 9.4 „ 667
19	14	9.0	9.0	+0 37	+ 4.2	„ 10.0 „ 924	49	29	10.4	9.5	−0 48	+23.1	„ 10.3 „ 534
20	15	9.1	9.3	−1 15	−12.9	„ 9.1 „ 410	50	29	10.4	9.7	+1 18	+18.3	„ 10.8 „ 1015
21	15	9.1	9.3	+0 8	+ 6.3	„ 9.9 „ 848	51	29	10.4	10	+1 45	−24.6	„ 9.8 „ 1078
22	15	9.1	9.0	−0 42	−23.7	„ 9.1 „ 565	52	30	10.5		+0 58	− 0.3	„ 10.6 „ 974
23	16	9.2	9.1	−1 16	−14.4	„ 9.4 „ 404	53	30	10.5		−0 50	+ 3.3	„ 10.1 „ 523
24	17	9.3	9.1	+1 7	−23.7	„ 9.2 „ 997	54	30	10.5	10	−0 50	+23.7	„ 10.2 „ 521
25	18	9.3	9.5	−1 36	+17.1	„ 10.7 „ 311	55	30	10.5		−0 8	+ 8.7	„ 10.8 „ 781
26	18	9.3	8.8	+0 20	+25.2	„ 9.2 „ 888	56	31	10.5		+0 41	+ 5.4	„ 10.8 „ 938
27	18	9.3	9.3	−0 23	−19.8	„ 9.4 „ 714	57	32	10.7		0 0	−12.0	„ 10.7 „ 823
28	19	9.4	9.5	−1 39	+ 5.7	„ 9.9 „ 303	58	33	10.8		−0 34	+ 6.9	„ 10.5 „ 635
29	19	9.4	9.0	−0 33	+25.0	„ 9.3 „ 638	59	33	10.8		−0 55	+ 5.4	„ 11.3 „ 506
30	19	9.5	9.0	+1 49	+23.7	„ 10.4 „ 1082	60	33	10.8		−0 9	+ 0.3	„ 10.8 „ 784

* θ^1 = Trapezium: $7^M.0$, $8^M.0$, $4^M.7$, $6^M.3$, secundum Σ, in ordine A. R.

** Bd. significat Catalogum Georgii Ph. Bond (H. C. O. Vol. V. pp. 70—94). Vide etiam Catalogum 155 stellarum Ottonis Struve (Mém. de Petersb. t. V, 1862, pp. 118—122). Ambo Catalogi illustrantur chartis describentibus regionem circa trapezium. De stellis quae ibi probabiliter variabiles notantur vide notam in III. Catalogo D. Chandler. T Orionis est Bond 822 I" I" et Herschel 138. De cujus variabilitate confer H. C. O. Vol. V. p. 137 sqq.

Comparationem harum Magn. cum magn. photographicis vide in H. C. O. Vol. XXXII. pp. 39—42, et Potsdam Astr. Obs. Vol. XI. pp. 60—67.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
61	34	10.9		$+0^m 40^s$	−14′.4	Bd. $10^M.2$ N. 937	69	42	11.7		$-0^m 3^s$	+12′.0	Bd. $11^M.9$ N. 808
62	35	10.9		−0 8	+15.0	„ 10.8 „ 785	70	43	11.7		−0 18	− 2.7	„ 10.8 „ 750
63	35	10.9		+0 16	−13.5	„ 10.5 „ 881							
64	37	11.1		−0 46	+14.1	„ 10.1 „ 551	71	46	12.0		−0 26	− 2.4	„ 10.3 „ 690
65	37	11.1		+0 9	−11.4	„ 11.0 „ 855	72	49	12.3		−0 37	−11.4	„ 11.8 „ 599
							73	60	13.3		−0 32	−14.4	„ 12.3 „ 658
66	37	11.2		−0 34	−10.8	„ 11.1 „ 639	74	64	13.7		−0 39	− 9.6	„ 11.5 „ 583
67	38	11.3		−0 24	+13.5	„ 11.5 „ 700		invis.			+0 2	− 0.3	„ 13.9 „ 832
68	41	11.5		+0 19	+ 0.9	„ 11.3 „ 889							

$$M = 9.1 + 0.094\ (G - 15.3).$$

6905

R Sagittarii

$19^h\ 8^m\ 11^s$ (1855.0) $-19°\ 33'.5$

Max. = 2 402 801^d (18. Jul. 1866) + 268^d.7 E + 20^d sin (10° E + 330°).

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1			5.3	$+0^m58^s$	+21'.3	S. 5^M.3, d=Fl. 43	36	45	9.9	9.6	-0^m36^s	− 2'.7	
2	0	8.0	8.0	+1 31	+26.3	Σ^I 2261 c. g.	37	47	9.9		+0 55	+ 4.5	
3	4	8.1	8.0	+3 18	− 1.2		38	49	10.0		+0 34	−18.7	
4	7	8.3	7.3	−1 17	−29.0		39	50	10.1		+0 36	+ 8.4	Duplex.
5	9	8.4	8.5	+1 39	− 3.7		40	51	10.1	9.5	+1 27	−27.5	
6	13	8.5	8.7	−1 56	+20.4		41	53	10.2	9.8	−0 45	+ 8.7	
7	16	8.6	9.0	+0 50	+14.7		42	53	10.2		−0 35	−11.4	
8	18	8.7	8.5	+1 23	+ 9.8		43	53	10.2		−0 34	+14.8	
9	19	8.8	8.8	+0 29	+19.2		44	55	10.3		−0 4	+ 1.5	Sch. 10^M.8
10	21	8.8	9.1	+0 43	+ 6.3		45	56	10.3	9.7	−0 33	−21.6	
11	25	9.0	9.2	+1 50	+13.9		46	57	10.3	9.9	+0 22	−24.7	
12	25	9.0	9.0	+1 14	− 7.0		47	57	10.4		+0 50	+ 3.3	
13	28	9.1	8.8	+1 4	−19.9		48	58	10.4		+0 52	+10.5	
14	28	9.2	9.3	−1 11	− 3.6		49	59	10.5		−0 53	+ 5.1	
15	29	9.2	9.3	+0 16	+15.0		50	60	10.5		−0 20	− 4.8	
16	29	9.2	9.4	+0 40	+15.6		51	62	10.6		+0 12	+ 4.8	
17	32	9.3	9.2	+0 48	−26.3		52	63	10.6		+0 23	+13.8	
18	33	9.4	9.3	−1 11	− 7.8		53	64	10.7		−0 34	+13.5	
19	34	9.4	9.4	+0 37	+11.2		54	67	10.8		+0 31	+10.8	
20	36	9.5	9.7	+1 5	+ 2.4		55	68	10.8		−0 38	+ 3.9	
21	37	9.5	9.3	+0 11	+ 5.4		56	71	10.9		+0 49	+ 8.4	
22	38	9.5	9.6	+1 42	+14.5		57	72	11.0		−0 11	+ 6.6	
23	38	9.6	9.8	−0 22	+24.0		58	73	11.0		+0 8	+ 7.0	
24	38	9.6	9.4	+0 24	− 0.6		59	75	11.1		−0 12	+ 0.9	
25	40	9.6	9.5	−1 25	− 2.7		60	79	11.3		+0 2	+ 4.9	
26	41	9.7	9.6	−0 8	−13.8		61	80	11.3		−0 16	+11.7	
27	42	9.7	9.9	−0 3	− 2.9		62	81	11.4		+0 15	−10.9	
28	43	9.8	9.8	+1 5	+13.4		63	84	11.5		−0 4	+ 7.0	
29	43	9.8	9.8	+1 10	+18.6		64	89	11.7		−0 14	0 0	
30	44	9.8	9.5	+1 53	−25.2		65	91	11.8		−0 1	−0 3	Sch. 11^M.3
31	44	9.8	9.5	0. 0	+ 5.1		66	93	11.9		−0 8	−12.3	
32	44	9.8	9.5	−1 16	+ 6.9		67	94	11.9		+0 6	− 3.9	
33	44	9.8	9.6	−0 16	−14.4		68	95	11.9		+0 30	+ 1.5	
34	44	9.8	9.5	−1 2	− 6.3		69	96	12.0		+0 5	−13.0	
35	45	9.8	10	+1 17	+ 9.6		70	97	12.0		+0 25	− 9.0	

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
71	97	12.0		$+0^m\ 6^s$	− 2'.7		79	100	12.2		-0^m16^s	−11'.7	
72	97	12.0		+0 3	−12.9		80	101	12.2		+0 41	− 3.0	
73	98	12.1		+0 3	− 5.1								
							81	104	12.3		+1 3	− 3.9	
74	98	12.1		+0 25	+ 1.8								
							82	105	12.4		+0 44	−12.0	
75	99	12.1		+0 45	−14.1								
							83	106	12.4		+0 56	− 3.0	
76	99	12.1		−0 21	− 4.0		84	113	12.7		+0 36	− 2.8	
77	100	12.2		−0 14	− 3.7		S			var.	+2 46	+16.4	
78	100	12.2		+0 46	0.0								

$$M = 9.0 + 0.042\ (G - 24.8).$$

5430

T Librae

$15^h\,2^m\,28^s$ (1855.0) $-19^\circ\,27'.8$

Max. = 2 407 105^d (30. Apr. 1878) + 238^d E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1			4.5	$+1^m\,29^s$	+13'.4	S. $4^M.9$, ι = H h 465	18	37	10.3	10	$+0^m\,9^s$	− 9'.7	
2	0	7.4	7.3	−0 56	−30.1		19	42	10.6		+0 15	+ 5.0	
3	12	8.3	9.0	−1 44	−22.6		20	42	10.7	10	+0 7	− 0.7	
4	19	8.8	9.2	−0 23	−10.0								
5	22	9.1	9.4	−0 39	+ 8.3		21	47	11.0		−0 28	+11.6	
							22	48	11.1		−0 29	− 4.3	
6	23	9.2	9.2	+1 56	+11.3		23	50	11.3		−1 0	+ 6.9	
7	24	9.3	9.5	−1 32	+14.9		24	53	11.5		+0 18	+ 9.2	
8	26	9.4	9.5	−1 49	−11.2		25	55	11.7		−0 50	+11.3	
9	27	9.5	9.8	+0 32	+10.2								
10	29	9.6	9.5	−0 29	− 6.7		26	57	11.8		−0 9	−14.2	
							27	59	12.0		−0 3	−13.3	
11	29	9.6	9.5	+1 50	− 1.9		28	61	12.2		−0 54	+ 4.4	
12	30	9.7	9.5	+0 27	+ 9.5		29	62	12.2		+0 7	−10.3	
13	30	9.7	9.0	+1 33	+13.1		30	68	12.7		−0 17	+ 9.8	
14	32	9.9	10	−1 9	−25.0								
15	32	9.9	9.4	+1 25	−18.5		31	69	12.8		−0 3	− 0.1	Ch. 13^M (±)
							32	71	12.9		−0 56	− 6.4	
16	35	10.1	9.9	−0 51	−24.7								
17	37	10.3		−0 45	+ 9.9								

Ch. $13^M.5$, -1^s, $+1'$ invisib.

M = 9.5 + 0.078 (G − 27.1).

1944

S Orionis

$5^h\,21^m\,51^s$ (1855.0) $-4^0\,48'.7$

Max. = 2 404 095^d (1. Febr. 1870) + 413^d E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.7	7.5	-0^m27^s	− 0'.3		31	47	10.2	9.5	$+1^m25^s$	−30'.3	
2	2	7.8	8.0	+1 51	+26.4	h 2270	32	47	10.2	9.5	+1 27	−19.5	
3	9	8.2	8.5	−1 21	−34.5		33	50	10.4	10	−0 1	+ 1.0	
4	12	8.4	8.7	+2 5	− 6.6		34	52	10.5		−0 29	+ 8.1	
5	13	8.4	8.6	−2 3	+23.4		35	53	10.6		+0 15	− 0.9	
6	16	8.6	8.5	+1 11	−30.6		36	56	10.7		+0 27	− 7.5	
7	19	8.7	9.5	−0 25	+30.6		37	59	10.9		+0 3	+ 3.3	
8	20	8.8	9.0	−1 45	+15.3		38	60	10.9		−0 12	− 9.3	
9	21	8 9	9.2	−0 27	+29.4		39	60	11.0		−0 55	+12.6	
10	22	8.9	9.0	−1 41	+24.6		40	60	11.0		+0 58	− 4.2	
11	23	9.0	9.1	−1 50	−17.4		41	62	11.1		−0 55	+ 4.5	
12	27	9.2	9.5	−1 30	−23.4		42	62	11.1		−0 15	+ 8.4	
13	28	9.2	9.1	+0 55	−14.4		43	62	11.1		+0 37	+ 9.0	
14	28	9.2	9.1	+1 59	+ 6.0		44	63	11.1		−0 30	−12.6	
15	28	9.2	9.5	−0 37	+30.0		45	65	11.2		−1 0	+ 2.1	
16	30	9.3	9.5	−0 28	−23.4		46	66	11 3		−0 22	− 4.2	
17	31	9.4	9.1	+0 12	− 6.6		47	67	11.3		+0 42	− 5.4	
18	32	9.4	9.4	−0 39	−21.9		48	68	11.4		+0 10	+13.5	
19	33	9.5	9.3	−1 51	−15.9		49	68	11.4		−0 46	− 1.5	
20	33	9.5	9.4	−0 48	+21.3		50	69	11.4		−0 34	+ 7.2	
21	34	9.6	9.5	+0 15	+ 6.3		51	70	11.5		−0 7	−13.5	
22	37	9.7	9.4	−1 57	−13.5		52	70	11.5		+0 5	+ 6.0	
23	38	9.8	10	−0 40	−18.6		53	71	11.5		+0 30	− 3.0	
24	38	9.8	9.4	−0 2	− 0.4	*	54	73	11.6		0 0	+ 7.2	
25	41	9.9	9.7	−0 54	+ 9.3		55	73	11.7		−0 29	+ 3.0	
26	42	10.0	9.5	+1 0	0.0		56	74	11.7		+0 24	− 3.3	
27	44	10.1	9.5	+0 36	−24.6		57	75	11.7		+0 3	− 2.4	
28	44	10.1	10	+1 32	− 2.7		58	78	11.9		−0 23	+ 2.4	
29	45	10.1	9.5	+1 57	−15.9								
30	45	10.2		−0 49	+11.1								

* Per errorem notatur S. in C. G. Argent. 6341.

$$M = 9.0 + 0.054\,(G - 23.6).$$

7252

W Capricorni

$20^h\,5^m\,57^s$ (1855.0) $-22^\circ\,24'.8$

Max. = 2 404 985^d (10. Jul. 1872) + 207^d.7 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.9	7.5	$-0^m\,11^s$	− 3'.7	CD. $7^M.8$	21	48	10.0		$+0^m\,40^s$	+ 8'.6	*
2	10	8.4	8.5	−1 12	− 4.5	„ 8.5	22	50	10.1	10	+1 48	−27.0	CD. $9^M.8$
3	14	8.5	8.7	+0 4	+25.4		23	50	10.1		−0 18	−15.1	
4	22	8.9	9.1	−1 18	+22.7		24	51	10.1		−1 12	− 7.9	„ 10
5	24	9.0	9.4	+0 5	− 3.6	„ 9.3	25	54	10.3	9.8	+0 56	−10.5	„ 10
6	26	9.0	9.1	+1 51	+ 9.8	„ 9.1	26	55	10.3		−0 6	− 9.1	„ 10
7	27	9.1	9.2	−1 2	− 9.4	„ 9.2	27	59	10.5		+0 20	− 0.1	„ 10
8	30	9.2	9.0	−1 52	−28.0	„ 9.2	28	63	10.6		+0 45	− 5.8	
9	30	9.2	9.4	−0 15	−15.1	„ 9.6	29	65	10.7		+0 46	+ 2.0	„ 10
10	35	9.4	9.4	−0 25	−24.9	„ 9.8	30	65	10.7	9.8	−1 38	−24.1	„ 10
11	35	9.4	9.5	+1 7	− 7.9	„ 9.6	31	67	10.8		+0 36	+ 5.3	
12	38	9.6	10	−0 23	+26.0		32	70	10.9		−0 28	+ 7.7	
13	41	9.7		+0 6	−13.0	„ 9.6	33	73	11.1		+0 2	−16.3	
14	41	9.7	9.8	−1 15	+ 8.0	„ 9.7	34	74	11.1		+0 26	− 2.8	
15	44	9.8		+0 38	+ 8.3	*	35	77	11.2		+0 8	− 0.1	
16	44	9.8	9.5	−0 18	−24.0	„ 9.8	36	80	11.4		−0 21	− 3.7	
17	46	9.9		+1 0	−13.6	„ 9.9	37	84	11.5		0 0	− 8.5	
18	46	9.9	9.5	−0 37	−15.2	„ 9.8							
19	46	9.9	9.8	+1 36	+24.8								
20	48	10.0		−0 51	−14.8	„ 9.8							

* (15 et 21) = BD. − 22°.5375, $9^M.3$.

$$M = 9.0 + 0.043\ (G - 24.8).$$

Z Sagittarii

$19^h\,11^m\,7^s$ (1855.0) $-21°\,11'.2$

Max. = 2 410 865^d (15. Aug. 1888) + 452^d E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.4	8.3	$-1^m\,21^s$	+29'.5		38	67	10.8		$+0^m\,43^s$	+ 9'.0	
2	3	8.5	8.3	−0 27	+ 2.0		39	68	10.8		+0 6	− 1.4	
3	7	8.6	8.5	−0 11	−15.4		40	69	10.8		−0 37	+ 5.0	
4	11	8.8	8.8	+0 45	−20.3		41	69	10.8		+0 38	+ 9.9	
5	16	9.0	9.0	+1 18	+13.8		42	69	10.9		−0 36	− 2.6	
6	19	9.1	9.2	−0 13	+30.2		43	71	10.9		−0 36	+ 9.1	
7	20	9.1	9.3	+0 7	+18.2		44	72	11.0		+0 19	+12.1	
8	20	9.1	9.1	−1 54	−14.4		45	72	11.0		+0 12	− 5.9	
9	23	9.2	9.5	+0 7	−13.2		46	73	11.0		−0 47	− 7.7	
10	24	9.3	9.7	+1 35	+27.3		47	74	11.0		−0 21	+ 3.8	
11	24	9.3	9.5	+0 7	−23.2		48	74	11.0		+0 17	+ 3.1	
12	26	9.3	9.1	−0 56	−29.2		49	75	11.1		+0 30	− 3.5	
13	26	9.3	9.5	−0 37	+13.8		50	75	11.1		−0 13	+13.3	
14	30	9.5	9.5	+0 57	+ 9.1		51	75	11.1		−0 13	− 6.2	
15	30	9.5	9.4	+0 54	− 2.4		52	76	11.1		+0 2	− 0.6	
16	33	9.6	9.7	−1 45	+26.1		53	78	11.2		−0 3	+ 6.1	
17	34	9.6	9.6	+1 40	−15.0		54	78	11.2		+0 30	+ 8.8	
18	34	9.6	9.5	−1 38	−27.4		55	79	11.2		+0 2	+12.4	
19	37	9.7	9.4	−1 48	−12.9		56	79	11.2		0 0	− 4.4	
20	38	9.7	9.6	+1 31	−19.4		57	80	11.2		−0 7	− 7.7	
21	39	9.8		+1 37	− 1.7		58	81	11.3		−0 48	+ 5.5	
22	39	9.8	10	+1 25	+26.4		59	81	11.3		+0 5	− 0.3	
23	40	9.8	9.9	+1 40	−24.0		60	82	11 3		+0 44	−10.4	
24	42	9.9	9.9	−0 48	+16.6		61	83	11.4		−0 24	+13.9	
25	43	9.9	9.5	−0 20	− 5.3		62	83	11.4		+0 21	+ 1.9	
26	47	10.1	10	+1 15	− 2.6		63	83	11.4		−0 4	− 3.2	
27	49	10.1	9.9	−0 45	− 1.6		64	85	11.4		+0 19	+ 7.9	
28	50	10.2	9.8	+1 31	−15.8		65	85	11.4		+0 38	− 2.6	
29	54	10.3		−0 55	− 5.7		66	86	11.5		+0 34	−12.2	
30	60	10.5		−0 17	− 2.0		67	86	11.5		−0 19	− 4.1	
31	61	10.6		−0 57	+ 2.8		68	88	11.5		−0 25	+ 5.8	
32	62	10.6		+0 29	−12.5		69	88	11,5		+0 5	+13.6	
33	62	10.6		+0 13	− 0.4		70	90	11.6		−0 9	+ 3.1	
34	63	10.6		0 0	− 0.5		71	92	11.7		−0 36	+14.5	
35	64	10.7		+0 27	+ 5.5								
36	66	10.7		−0 49	− 9.9								
37	66	10.8		−0 59	+12.7								

M = 9.5 + 0.036 (G − 30.9).

8597

V Ceti

$23^h\,50^m\,29^s$ (1855.0) $-9^0\,46'.1$

Max. = 2 407 590^d (28. Aug. 1879) + 261^d E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.6	8.0	$-2^m\,10^s$	− 6'.3		16	67	10.2		$-0^m\,2^s$	+ 9'.3	
2	14	8.1	7.8	+1 14	+27.8		17	68	10.2	10	+1 33	− 2.1	
3	25	8.5	8.5	+0 55	+ 8.1		18	74	10.4		+0 18	− 2.4	
4	38	9.0	9.2	−1 28	+14.3		19	76	10.5		+0 14	+ 6.9	
5	47	9.4	9.5	+1 32	−19.2		20	78	10.6		+0 53	+ 1.8	
6	48	9.5	9.4	−1 7	−27.3		21	78	10.6		−0 57	− 2.1	
7	51	9.5	9.6	−1 20	+11.1		22	81	10.7		−0 30	− 2.1	
8	52	9.6	9.5	−1 3	+13.7		23	82	10.7		−0 2	− 3.9	
9	56	9.8	9.5	+0 30	−26.7		24	82	10.7		−0 7	+ 2.1	
10	59	9.9	9.5	−1 57	+23.7		25	86	10.9		−0 28	+ 2.1	
11	60	9.9	10	−1 36	−19.5		26	90	11.0		+0 43	+ 3.3	
12	63	10.0	10	−1 54	− 5.7		27	95	11.2		+0 32	+ 1.5	
13	63	10.0	9.9	−1 38	+26.0		28	97	11.3		+0 5	+ 1.5	
14	63	10.0		+1 1	+ 2.7								
15	66	10.1		−0 44	− 2.1								

M = 8.1 + 0.038 (G − 12.8).

7577

X Capricorni

$21^h\,0^m\,15^s$ (1855.0) $-21°\,55'.8$

Max. = 2 403 196^d (17. Aug. 1867) + 218^d.1 E + 20^d sin (10° E + 50°).

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1			5.3	$+0^m\ 1^s$	+ 9'.6	S. $5^M.4$, $\chi 25 = h3009$	16	35	9.8	10	$+1^m25^s$	+14'.4	
							17	38	10.0	9.6	−1 27	−26.3	CD. $9^M.5$
2	0	7.9	7.8	+0 3	−20.1	CD. $7^M.8$	18.	38	10.0	9.8	+1 14	+10.5	
3	4	8.1	8.3	+1 2	+18.0		19	38	10.0	9.9	−1 32	+24.6	
4	11	8.5	8.7	−1 25	+27.5		20	41	10.1	10	+1 9	− 9.0	„ $9^M.6$
5	18	8.9	9.2	−0 20	+21.1		21	43	10.3		+0 30	− 2.4	
6	20	9.0	9.0	−0 33	+ 8.7		22	44	10.3	10	+0 9	− 3.0	
7	22	9.1	9.0	−0 37	+14.1		23	45	10.3		−0 20	− 0.6	
8	22	9.1	9.1	−0 39	−18.9	„ 9.3	24	49	10.6		+0 47	+ 6.0	
9	23	9.2	9.3	+1 34	+29.0		25	53	10.8		+0 57	+14.7	
10	28	9.4	9.5	+1 28	−14.4	„ 9.3	26	55	10.9		+0 5	+ 9.9	
11	28	9.5	9.5	−0 5	+23.7		27	58	11.0		+0 13	− 3.3	
12	31	9.6	9.3	−0 55	− 9.6	„ 9.3	28	60	11.2		−0 13	− 8.4	
13	32	9.7	10	+1 53	+17.7		29	66	11.5		+0 46	− 7.5	
14	33	9.7	9.8	−1 53	+24.0		30	76	12.0		−0 38	+ 6.6	
15	35	9.8	9.5	+0 50	−21.3	„ 9.6	31	85	12.5		−0 43	+ 1.5	

$M = 8.9 + 0.054\ (G - 17.9)$.

7571

V Capricorni

$20^h\,59^m\,9^s$ (1855.0) $-24^\circ\,30'.2$

Max. = 2 403 197^d (18. Aug. 1867) + 157^d.1 E + 15^d sin (10° E + 100°).

Num.	Gradus	Magn.	CD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	CD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.4	7.4	+1^{m}36^s	+17'.7		21	85	10.6	10	+0^m 5^s	+26'.1	
2	4	7.6	7.6	+0 55	−17.4		22	87	10.6	9.9	+0 10	+ 3.1	
3	27	8.4	8.5	−2 41	+18.6		23	87	10.6	10	−1 0	− 5.8	
4	39	8.9	9.0	−1 37	−16.2		24	88	10.7	9.8	−0 58	− 4.5	
5	47	9.2	8.7	−0 57	+19.8		25	90	10.8	10	+0 2	+13.6	
6	51	9.3	9.3	−0 45	+20.3		26	91	10.8	10	−0 58	−17.8	
7	56	9.5	9.0	−1 20	+20.6		27	94	10.9	9.8	+1 12	+27.7	
8	57	9.6	9.5	−1 18	−17.3		28	96	11.0	10	−1 46	− 0.9	
9	60	9.6	9.6	+0 22	− 6.8		29	100	11.1	10	+0 20	−12.9	
10	64	9.8	9.4	−1 19	+21.6		30	101	11.2		−0 4	+10.8	
11	64	9.8	9.6	−2 2	+ 0.2		31	105	11.3	10	+0 34	+15.1	
12	66	9.9	9.8	+1 35	+ 3.1		32	111	11.5		+0 15	+13.8	
13	69	10.0	9.8	+1 33	+ 2.6		33	114	11.6		−0 51	− 5.2	
14	74	10.2	9.7	+0 44	− 2.4		34	116	11.7		+0 10	− 0.9	
15	74	10.2	9.6	−1 36	+30.0		35	120	11.9		+0 48	−10.0	
16	74	10.2	9.9	−0 13	−23.6		36	123	12.0		+0 3	−14.2	
17	75	10.2	9.8	−1 53	+11.4		37	127	12.1		+0 34	+ 2.3	
18	77	10.3	9.9	+0 48	+ 8.1		38	130	12.2		−0 30	+12.9	
19	80	10.4	9.9	+0 13	−20.3		39	130	12.2		+1 1	− 7.5	
20	84	10.6	10	+0 10	+15.6								

Computatio magnitudinum hic paullulum differt a consueta, quia limitem 10^M in catalogo CD. nostris observationibus ad scalam Bonnensem reduximus.

$$M = 9.0 + 0.037\ (G - 47.4).$$

7907

U Aquarii

$21^h\,55^m\,24^s$ (1855.0) $-17^\circ\,19'.5$

Max. = 2 406 105^d (4. Aug. 1875) + 258^d E?

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1			6.8	$-0^m\,54^s$	$-20'.4$	Dupl. Fl. 29.*	16	32	10.5		$-0^m\,11^s$	$+12'.6$	
2	0	8.1	8.0	+0 53	+27.7		17	36	10.8		−0 31	− 3.0	
3	4	8.4	8.5	−1 30	− 8.9		18	36	10.9		−0 50	+ 5.1	
4	7	8.7	8.8	−0 51	+26.6		19	40	11.2		−0 1	− 2.1	
5	10	8.9	9.0	+0 2	+27.2		20	43	11.4		−0 48	+ 0.2	
6	12	9.1	9.1	−2 3	+24.8		21	47	11.7		−0 33	− 6.6	
7	14	9.2	9.1	−0 34	+11.8		22	47	11.7		−0 29	+ 4.9	
8	15	9.3	9.2	+0 11	−27.1		23	48	11.8		+0 48	−0 .3	
9	18	9.5	9.5	+0 13	−16.9		24	49	11.9		−0 53	− 4.0	
10	18	9.5	9.3	+0 15	+ 9.9		25	56	12.4		+0 15	− 6.2	
11	20	9.7	9.9	+1 4	−14.4		26	61	12.8		+0 14	− 0.6	
12	22	9.8	9.9	+1 7	−10.8		27	66	13.2		+0 26	+ 1.9	
13	24	9.9	9.8	−1 57	+23.1								
14	24	10.0	9.8	+1 43	−13.0								
15	25	10.1	10	+0 25	− 6.4								

* Σ^I 2654 c. g., U. A. $7\frac{1}{2}^M$, 7^M in ordine A. R.

$$M = 9.0 + 0.077\,(G - 24.2).$$

5931

S Ophiuchi

$16^h\,25^m\,55^s$ (1855.0) $-16^\circ\,51'.1$

Max. = 2 399 495^d (29. Jun. 1857) + 233^d.8 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.1	8.0	$-2^m\,37^s$	−32′.9		23	97	10.8		$+0^m\,17^s$	+ 5′.9	
2	5	8.2	8.3	+2 45	− 0.4		24	102	11.0		+0 41	+ 8.1	
3	30	8.9	9.1	−1 26	− 8.8		25	102	11.0		−0 14	+ 0.8	Ch. 12^M
4	30	8.9	9.0	+0 21	+14.7		26	106	11.1		+0 21	− 2.1	
5	37	9.1	9.1	−1 44	−29.6		27	108	11.1		−0 17	+ 6.6	Duplex.
6	41	9.2	9.3	+2 0	− 1.8		28	110	11.2		+0 41	+ 3.3	
7	42	9.3	9.4	+0 53	+11.8		29	114	11.3		+0 28	+11.4	
8	49	9.5	9.5	+0 57	+ 0.4		30	114	11.3		+0 47	− 8.7	
9	50	9.5	9.4	+1 56	+ 8.4		31	121	11.5		+0 57	− 8.4	
10	56	9.7	9.5	+0 49	+26.0		32	125	11.6		+0 37	+ 6.3	
11	56	9.7	9.5	−1 7	+12.9		33	125	11.6		−0 9	+11.4	
12	59	9.8	9.8	−0 54	+ 9.3		34	128	11.7		−0 11	+ 9.0	
13	65	9.9	9.7	+0 39	−21.3		35	131	11.8		+0 1	+ 6.3	
14	67	10.0		+0 59	+11.3		36	135	11.9		−0 13	+ 9.9	
15	70	10.1		+0 28	− 6.6		37	135	11.9		−0 28	− 2.7	
16	75	10.2		−0 52	− 9.6		38	143	12.2		−0 15	− 4.8	
17	77	10.3		−0 22	−10.5		39	146	12.2		+0 2	− 4.5	
18	81	10.4		+0 44	−12.0		40	152	12.4		+0 14	− 2.2	
19	84	10.5		+0 8	−10.4		41	156	12.5		−0 2	− 7.5	
20	86	10.5		−0 55	+ 3.0								
21	92	10.7		−0 5	+ 4.2	Ch. $11\frac{1}{2}^M$							
22	95	10.8		−0 54	− 3.0								

M = 8.9 + 0.029 (G − 29.2).

S Sagittarii

$19^h\,10^m\,57^s$ (1855.0) $-19^\circ\,17'.1$

Max. = 2 402 870^d (25. Sept. 1866) + 230^d.6 E (Inaequalitas periodica).

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1			5.3	$-1^m\,48^s$	+ 4'.8	S. 5^M.3, d=Fl. 43	36	51	10.3		$+0^m\,1^s$	+14'.1	
2	0	8.0	8.0	−1 14	+ 9.6	Σ^I 2261 c. g.	37	56	10.5		+0 50	−12.3	
3	3	8.2	8.0	+0 33	−20.7		38	56	10.5		−0 54	−10.8	
4	3	8.2	8.0	−0 55	+19.5	Hh 607	39	58	10.6		+0 34	+ 5.4	
5	5	8.3	8.3	+1 50	+22.2		40	61	10.7		+0 11	+13.5	
6	6	8.3	8.5	−1 6	−20.2		41	64	10.8		+0 24	+11.1	
7	8	8.4	8.5	−0 41	+17.4		42	67	11.0		−1 1	− 9.6	
8	11	8.5	8.8	+1 1	+ 9.3		43	67	11.0		+0 21	− 0.3	
9	13	8.6	8.7	−1 58	+26.7		44	68	11.0		−0 35	+ 9.9	
10	15	8.7	9.0	−1 55	− 1.8		45	68	11.0		−0 7	−14.1	
11	15	8.7	9.1	+1 4	+ 1.5		46	68	11.0		+0 51	− 3.6	
12	17	8.8	8.5	−2 3	+15.6		47	70	11.1		−0 15	−12.9	
13	17	8.8	9.2	+1 24	− 2.4		48	71	11.1		+0 41	− 7.0	
14	18	8.8	8.5	−1 23	− 6.6		49	73	11.2		−0 49	+ 8.7	
15	24	9.1	9.2	−0 55	− 2.7		50	73	11.2		+0 57	+ 0.9	
16	25	9.1	9.0	−1 31	−23.7		51	73	11.2		+0 17	+ 8.7	
17	27	9.2	9.5	+1 10	− 8.4		52	73	11.2		+0 8	− 6.3	
18	29	9.3	9.1	+0 5	−27.0		53	74	11.3		−0 16	+ 9.0	
19	31	9.4	9.5	+0 51	+14.1		54	74	11.3		−0 18	− 2.7	
20	31	9.4	9.3	+0 50	−29.0		55	75	11.3		−0 37	−10.5	
21	32	9.5	9.4	+0 22	−15.0		56	75	11.3		+0 54	− 1.2	
22	34	9.5	9.3	−0 4	−26.0		57	75	11.3		−0 43	+12.0	
23	36	9.6	9.8	+0 33	+23.1		58	75	11.3		−0 49	+ 6.0	
24	36	9.6	9.7	−1 41	−14.2		59	77	11.4		−0 4	−10.2	
25	38	9.7		+0 21	+23.1		60	78	11.4		−0 21	− 0.3	
26	38	9.7	9.6	−1 4	− 2.4		61	79	11.5		−1 0	+12.3	
27	39	9.7		+0 45	+18.0		62	81	11.6		+0 19	− 3.3	
28	39	9.8	9.5	+0 52	−15.6		63	81	11.6		0 0	+ 4.9	
29	44	9.9	9.8	−1 39	− 2.7		64	81	11.6		−0 35	−13.2	
30	45	10.0		+0 45	+ 8.1		65	82	11.6		−0 22	−12.6	
31	45	10.0	9.8	−1 35	+ 2.1		66	83	11.7		−0 12	+ 8.7	
32	46	10.0	10	−1 28	− 6.8		67	84	11.7		−0 20	− 5.4	
33	47	10.1		−0 58	+11.7		68	88	11.9		−0 40	+10.5	
34	47	10.1		+0 32	− 8.7		69	89	11.9		−0 5	+ 4.5	
35	50	10.2	9.8	+0 29	− 1.2		R			var.	−2 46	−16.4	

Ch. 11^M, $+24^s - 2'.5$?

M = 9.0 + 0.044 (G − 21.9).

2857

U Puppis

$7^h\,54^m\,2^s$ (1855.0) $-12^0\,26'.6$

Max. = 2 408 148^d (8. Mart. 1881) + 315^d E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.7	7.6	$-1^m\,5^s$	− 1'.2		36	27	10.2	10	$+0^m\,38^s$	+12'.0	
2	3	8.0	8.3	+1 16	+ 2.7		37	27	10.2	9.8	+0 8	+10.8	
3	3	8.0	8.5	−0 24	+20.4		38	28	10.2	9.8	−0 50	−18.9	
4	5	8.2	8.5	−1 21	+20.1		39	29	10.4		−1 1	− 7.8	
5	5	8.2	8.5	+1 43	+29.0		40	29	10.4		+0 33	+15.9	
6	8	8.4	8.8	+0 50	+ 6.9		41	30	10.4		−1 0	− 5.1	
7	10	8.6	8.7	−1 56	−28.1		42	31	10.6		+0 35	+ 9.0	
8	10	8.7	8.3	+0 34	+ 3.0		43	32	10.6		−1 0	+11.1	
9	13	8.9	8.7	+0 33	−23.1		44	33	10.7	9.5	−0 10	−12.9	
10	13	8.9	9.0	+1 29	+ 2.4		45	33	10.7		−0 26	+ 3.3	
11	14	9.0	8.9	−0 4	−14.4		46	33	10.7		−0 36	−10.2	
12	16	9.1	9.1	+1 5	+17.7		47	35	10.9		−0 42	− 4.2	
13	17	9.2	9.0	−0 7	−13.5		48	36	11.0		−0 15	+11.7	
14	17	9.3	9.1	+1 36	−21.0		49	36	11.0		+0 39	+13.2	
15	18	9.4	9.6	−1 35	+10.8		50	36	11.0		−0 36	−15.0	
16	19	9.4	10	+1 19	−10.8	Duplex.	51	37	11.0		−0 4	− 4.5	
17	19	9.4	9.0	−0 2	−12.6		52	37	11.1		+0 34	− 0.9	
18	19	9.4	9.7	+1 48	−14.7	Duplex.	53	37	11.1		+0 22	− 4.5	
19	19	9.4	9.9	+1 28	− 3.0		54	37	11.1		−1 5	+ 1.2	
20	20	9.5	9.3	+0 44	+ 3.0		55	37	11.1		−0 33	−14.4	
21	21	9.6	9.5	−1 57	+16.2		56	38	11.2		+0 7	− 8.4	
22	21	9.6	9.3	−0 25	+18.6		57	38	11.2		−0 12	+12.3	
23	21	9.6	9.9	+0 59	−15.0		58	39	11.3		−0 8	− 6.3	
24	21	9.7	9.4	−1 51	− 3.3		59	39	11.3		+0 51	+11.4	
25	22	9.7	9.5	+0 53	+ 7.8		60	40	11.3		−0 37	+13.5	
26	22	9.7	9.1	−0 28	−24.0		61	40	11.3		−0 14	+ 2.4	Ch. 11^M
27	22	9.7	9.9	+1 51	+18.0		62	40	11.4		−0 8	−12.0	*
28	23	9.8	9.3	−0 29	−13.8		63	41	11.4		−0 10	+12.0	
29	23	9.8	10	−1 24	+17.7		64	41	11.4	9.9	+1 39	− 6.9	Duplex.
30	24	9.9	9.7	+0 25	+ 3.9		65	42	11.5		−0 7	− 9.0	*
31	25	10.0	10	+1 5	+15.6		66	42	11.5		−0 47	+ 9.3	
32	26	10.1	10	−1 9	+11.7		67	42	11.6		+0 55	+ 9.0	
33	27	10.1	9.7	−1 43	−12.3		68	43	11.6		−0 40	− 9.3	
34	27	10.2	9.3	−1 54	−20.1		69	43	11.6		−0 15	+ 9.6	
35	27	10.2	9.5	−1 13	−27.2		70	44	11.7		−0 49	+14.7	

* ½ (62 + 65) = BD. − 12°.2271, 10^M ?.
Ch. 13^M, $+2^s$ − 1'.5 invisib.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
71	45	11.8		$+0^m24^s$	− 9″.6		86	49	12.2		-0^m31^s	+ 9″.9	
72	45	11.8		−0 37	+12.3		87	49	12.2		+0 36	− 0.3	
73	45	11.8		+0 42	+10.5		88	51	12.3		+0 2	− 9.0	
74	46	11.9		+0 5	+ 5.4		89	51	12.3		+0 43	− 6.9	
75	46	11.9		−0 24	− 3.9		90	52	12.4		+0 9	0.0	
76	47	12.0		+0 20	− 3.6		91	52	12.4		−0 20	+ 6.9	
77	47	12.0		−0 30	− 0.9		92	52	12.5		−0 11	+ 4.2	
78	47	12.0		+0 12	+ 8.7		93	54	12.7		+0 23	− 2.1	
79	47	12.0		−0 43	+ 8.1		94	54	12.7		+0 16	+ 6.9	
80	47	12.0		+1 2	+ 8.4		95	55	12.7		+0 58	+ 3.0	
81	47	12.0		−0 5	+ 5.7		96	55	12.7		0 0	+10.2	
82	47	12.0		−0 55	− 3.6		97	56	12.8		+0 57	− 9.9	
83	48	12.0		−0 5	− 6.9		98	57	12.9		+1 1	+ 3.0	
84	49	12.1		+0 16	− 6.9		99	59	13.1		−0 9	− 1.2	
85	49	12.2		+0 30	+ 9.6		100	60	13.2		+0 51	+ 0.6	

$$M = 9.0 + 0.091\ (G - 14.1).$$

845

R Ceti

$2^h\,18^m\,38^s$ (1855.0) $-0^\circ\,50'.1$

Max. = 2 403 028^d.0 (2. Mart. 1867) + 167^d.0 E, (Inaequalitas periodica).

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.0	8.0	$+1^m\,28^s$	$-34'.3$		16	55	10.7		$-0^m\,3^s$	$-15'.6$	
2	10	8.5	8.3	+2 23	− 3.1		17	56	10.8		+0 17	+13.0	
3	12	8.6	8.8	+1 57	+24.0		18	60	10.9		+0 52	+ 4.2	
4	22	9.1	9.3	+1 9	+20.4		19	65	11.2		−0 50	− 9.6	
5	26	9.3	9.3	+2 9	−32.0		20	66	11.2		+0 25	+12.0	
6	28	9.4	9.2	+0 5	−15.9		21	70	11.4		−0 33	−13.5	
7	29	9.4	8.9	+1 36	−13.8		22	73	11.5		−0 57	+ 8.7	
8	34	9.7	9.5	−1 48	−24.6		23	76	11.7		−0 43	− 3.6	
9	38	9.8		+1 17	+ 9.6		24	78	11.8		−0 1	−11.7	
10	44	10.2		−0 39	− 5.7		25	78	11.8		−0 38	−11.7	
11	45	10.2		−0 22	+15.1		26	82	12.0		−0 59	−12.9	
12	49	10.4		−0 25	− 8.4		27	87	12.2		−0 15	− 1.2	
13	49	10.4		−0 39	+15.1		28	92	12.5		−0 1	+ 6.0	
14	52	10.5		+0 28	+14.2		29	95	12.6		−0 10	− 3 6	
15	54	10.6		−0 22	+ 6.3	*							

* 15 = Ch. 11^M, -12^s + 5' ?

$$M = 8.7 + 0.049\ (G - 14.0).$$

3184

T Hydrae

$8^h\,48^m\,37^s$ (1855.0) $-8^\circ\,35'.4$

Max. = 2 399 739^d (28. Febr. 1858) + 288^d.8 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.6	7.0	$-1^m\,26^s$	+22′.5		29	48	10.4		$-0^m\,21^s$	− 3′.3	
2	10	8.2	8.5	+1 46	−16.2		30	51	10.6		+0 46	+ 2.4	
3	10	8.2	8.5	+1 23	−28.8		31	55	10.9		+0 35	− 3.9	
4	11	8.2	8.3	−1 17	− 3.9		32	55	10.9		−0 48	− 7.5	
5	15	8.5	8.6	+2 0	+23.1		33	56	10.9		+0 19	+10.5	
6	17	8.6	9.0	+1 39	−18.9		34	56	10.9		+0 12	+ 0.9	
7	21	8.8	9.3	+1 56	+ 2.1	Variabilis?	35	57	11.0		−0 32	− 9.0	
8	21	8.9	8.8	+1 6	+ 5.1		36	58	11.1		+1 2	− 3.6	
9	23	9.0	9.0	−1 50	−18.0		37	59	11.1		+0 57	− 2.4	
10	24	9.0	9.0	+1 34	−20.1		38	59	11.1		−0 7	+ 8.4	
11	25	9.1	9.3	−1 21	+ 5.4		39	60	11.2		−0 16	+14.1	
12	26	9.1	9.1	−0 55	+13.5		40	60	11.2		+0 36	− 3.6	
13	28	9.2	9.1	+0 14	−15.3		41	61	11.2		+0 44	+ 9.9	
14	29	9.3	9.1	−1 2	+21.0		42	62	11.3		+0 8	+14.1	
15	32	9.5	9.0	−1 56	+11.7		43	63	11.3		−0 8	+ 2.1	Ch. $10^M.5$ (?)
16	33	9.6	9.3	+1 44	− 6.9		44	63	11.3		+0 22	− 5.4	
17	33	9.6	9.6	+0 37	−13.5		45	63	11.3		+0 48	− 3.9	
18	33	9.6	9.3	+0 3	+19.8		46	64	11.4		−0 6	+ 5.4	
19	37	9.8	9.5	−1 3	−13.5		47	66	11.5		+0 4	+14.4	
20	37	9.8	10	+0 8	+ 2.7		48	66	11.5		+0 13	+ 6.0	
21	40	10.0	9.4	−1 58	−15.9		49	66	11.5		+0 5	−11.4	
22	43	10.2	10	+0 43	− 7.2		50	66	11.5		+0 41	+ 4.8	
23	44	10.2		−0 33	− 4.2		51	67	11.6		−0 5	+ 5.3	
24	45	10.3		+0 33	0.0		52	68	11.7		+0 2	− 5.7	
25	45	10.3		−0 28	+ 9.6		53	68	11.7		+0 52	− 5.1	
26	46	10.3		+0 26	−11.7		54	70	11.8		+0 4	+ 5.1	
27	47	10.4		−0 38	− 1.5		55	73	11.9		+0 33	− 2.7	
28	48	10.4		+0 44	+15.3								

$\mathbf{M = 9.0 + 0.060\ (G - 23.8).}$

8512

R Aquarii

$23^h\,36^m\,19^s$ (1855.0) $-16^\circ\,5'.3$

Max. $= 2\,382\,847^d.6$ (30. Nov. 1811) $+ 387^d.16\,E + 35^d \sin(10^\circ E + 235^\circ)$.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0		5.3	$-1^m\,22^s$	− 9′.6	S. $5^M.8$	16	66	9.9	10	$-0^m\,14^s$	−26′.0	
2	11		6.5	−5 48	+11.9	„ 6.8	17	67	9.9	9.7	+1 9	− 6.3	
3	20	7.8	7.8	+2 4	+31.7		18	75	10.3		−1 1	−14.4	
4	27	8.1	8.1	−1 51	−10.8		19	79	10.5		+0 31	− 2.4	
5	35	8.5	8.7	+0 13	−23.1		20	79	10.5		+0 49	+14.7	
6	40	8.7	8.8	−2 15	−20.4		21	83	10.6		−0 57	− 2.1	
7	42	8.8	9.0	+0 35	+18.3		22	86	10.8		−0 36	−11.7	
8	47	9.0	9.0	+1 38	− 3.6		23	90	11.0		−0 3	+12.6	
9	51	9.2	9.0	−1 54	+17.7		24	94	11.1		+0 35	−12.3	
10	56	9.4	9.3	−0 33	+12.0		25	96	11.2		+0 42	−14.4	
11	57	9.5	9.6	+0 32	−14.7		26	99	11.3		−0 45	− 6.7	
12	61	9.6	9.7	+1 1	+26.4		27	99	11.4		−0 41	− 9.0	
13	64	9.8	9.5	−0 31	− 9.3								
14	65	9.8	9.4	−1 2	− 9.9								
15	65	9.8	9.5	−1 42	− 9.9								

$M = 9.0 + 0.045\,(G - 46.7)$.

T Aquarii

$20^h\,42^m\,17^s$ (1855.0) $-5^\circ\,40'.9$

Max. = 2 401 096^d.0 (16. Nov. 1861) + 203^d.3 E + 8^d sin (7°.5 E + 255°).

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1			4.2	$-2^m\,12^s$	+ 8'.1	S. 4^M.8	33	54	10.5	10	$+0^m\,35^s$	−27'.6	
2	0		6.0	+2 11	−21.6		34	54	10.5		+0 4	−11.1	
3	4		6.5	+1 28	−27.9		35	59	10.8		−0 59	− 6.3	
4	9	7.5	7.5	−1 40	+30.7		36	59	10.8		+0 26	− 4.8	
5	14	7.8	8.5	+2 23	+26.6		37	60	10.9		+0 38	+10.5	
6	15	7.9	8.0	+0 46	+21.9		38	60	10.9		−0 38	+12.9	
7	20	8.2	8.8	−1 20	+23.1		39	61	11.0		+0 29	+ 8.1	
8	21	8.3	8.5	+1 53	+21.0		40	63	11.1		+0 23	− 6.6	
9	25	8.5	8.3	+0 24	+ 2.4		41	63	11.1		−1 5	+ 9.9	
10	32	9.0	9.4	+0 31	− 6.3		42	65	11.2		−0 37	− 4.5	
11	32	9.0	9.2	+1 31	− 2.7		43	65	11.2		+0 32	− 9.0	
12	35	9.2	9.4	−0 29	− 4.8		44	67	11.3		+0 55	+ 2.1	
13	36	9.3	9.1	+1 23	−26.7		45	67	11.3		+0 22	+ 5.7	
14	37	9.3	9.4	+1 46	+12.0		46	68	11.4		−0 40	+14.7	
15	37	9.3	9.5	−0 33	+17.7		47	70	11.6		+0 10	− 7.2	
16	37	9.4	9.3	+0 6	−25.8		48	71	11.7		−0 41	− 0.6	
17	40	9.5	9.5	−0 33	− 6.0		49	71	11.7		−0 34	− 8.4	
18	40	9.6	9.5	+0 42	− 5.4		50	71	11.7		+0 27	+13.5	
19	42	9.7	9.7	+1 13	− 5.1		51	74	11.9		+0 33	+11.7	
20	43	9.7	9.4	−1 4	−18.3		52	75	11.9		+0 3	+ 3.0	
21	46	10.0	10	−0 21	+ 3.3		53	76	12.0		−0 35	− 7.2	
22	47	10.0	9.7	+1 25	+ 6.0		54	76	12.0		+0 21	−14.7	
23	47	10.0	9.5	−1 42	−16.8		55	78	12.1		−0 33	− 9.0	
24	47	10.0	9.8	+0 38	−19.2		56	79	12.2		+0 19	+13.2	
25	48	10.1	9.5	−0 38	−27.6		57	82	12.4		−0 28	−11.1	
26	50	10.2	10	+0 20	−17.7		58	82	12.4		+0 2	− 2.7	
27	50	10.2		+0 48	− 6.0		59	85	12.6		+0 9	− 7.5	
28	52	10.3	10	−0 50	−28.2		60	85	12.6		+0 10	+ 2.4	
29	52	10.4	9.8	−1 39	+ 5.7		61	85	12.6		−0 48	− 3.3	
30	53	10.4	10	+0 17	−15.0								
31	53	10.4		+1 1	+ 3.6								
32	53	10.4		−0 48	+11.7								

M = 9.2 + 0.068 (G − 34.7).

4847

S Virginis

$13^h\,25^m\,26^s$ (1855.0) $-6^\circ\,26'.8$

Max. = 2 397 512^d (24. Jan. 1852) + 376^d.4 E + 20 sin (7°.5 E + 180°).

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0		6.6	$-2^m\,33^s$	+43′.5	S.6^M.4; 72 Virg.*	18	49	10.6		$+0^m\,8^s$	+11′.7	
2	7	7.3	7.0	+0 24	−25.8	S. 6.9.	19	52	10.9		−0 43	+ 6.6	
3	15	8.0	8.1	+2 4	+13.8		20	56	11.2		−0 56	+14.1	
4	21	8.5	8.5	−0 40	−14.4								
5	25	8.8	8.9	−1 4	−23.1		21	61	11.6		−0 58	+15.0	
							22	65	11.9		−0 50	+ 8.7	
6	26	8.8	9.1	+0 50	− 5.4		23	65	11.9		+0 2	− 2.7	
7	30	9.2	9.1	−0 24	− 6.6		24	67	12.1		−0 15	+ 4.2	
8	34	9.4	9.3	−0 43	− 2.4		25	71	12.4		+0 49	+ 5.5	
9	35	9.5	9.4	+1 39	−24.6								
10	35	9.5	9.6	−1 47	+23.1		26	73	12.5		−0 23	+12.6	
							27	74	12.6		+0 12	−15.0	
11	37	9.7	9.7	−1 18	+12.0		28	75	12.7		−0 29	+ 8.1	
12	39	9.8	9.5	−0 35	− 2.7		29	75	12.7		+0 22	+ 4.2	
13	40	9.9	10	+1 25	+24.9		30	76	12.8		+0 5	−15.0	
14	41	10.0	9.7	+0 21	+16.8								
15	41	10.0	9.9	−1 15	−26.1		31	78	12.9		−0 24	− 7.8	
							32	85	13.5		+0 44	+ 9.0	
16	43	10.1		−0 22	−14.7								
17	45	10.3	9.8	−0 27	+29.4								

* U. A. 154 Virg. var.?

M = 8.9 + 0.078 (G − 26.9).

5617

U Librae

$15^h\,33^m\,37^s$ (1855.0) $-20^0\,42'.6$

Max. = 2 405 363^d (23. Jul. 1873) + 226^d.2 E (Inaequalitas periodica ?).

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.1	8.1	$-1^m\,20^s$	$-24'.8$		16	52	10.2		$+0^m\,4^s$	$+12'.4$	
2	10	8.5	8.4	+1 17	+ 4.0		17	56	10.4		+0 10	−24.5	
3	16	8.8	9.1	−1 38	+13.6		18	59	10.5		−0 53	+ 9.1	
4	20	9.0	9.1	−1 19	− 0.2		19	63	10.7		−1 0	−14.6	
5	24	9.1	9.1	+0 10	− 7.4		20	67	10.8		−0 10	−12.1	
6	25	9.2	9.1	+1 15	+27.1		21	71	11.0		−0 43	− 8.1	
7	31	9.4	9.6	−1 7	− 6.2		22	72	11.0		−0 30	+ 3.7	
8	33	9.5	9.5	+1 41	+12.1		23	76	11.2		−0 53	+12.1	
9	38	9.7	9.6	−0 40	+12.1		24	76	11.2		+0 28	+ 3.1	
10	43	9.9	10	−0 19	− 5.4		25	80	11.4		+0 46	+ 5.2	
11	46	10.0	10	−1 14	−18.8		26	81	11.4		−0 27	+ 7.3	
12	47	10 0		−0 52	− 0.2		27	82	11.5		−0 9	+ 1.1	
13	48	10.1	10	+1 38	− 0.5		28	82	11.5		+0 11	+ 3.4	
14	49	10.1	10	−0 2	+ 0.1		29	87	11.7		−0 2	− 2.6	Duplex.
15	51	10.2	9.9	+0 23	−25.5		30	88	11.7		−0 49	− 8.0	

BD. $-20^0.4293$ ($9^M.8$, $-1^m\,58^s.5$, $-11'.4$) nunquam visa (1891, 92, 94, 95).

$$M = 9.1 + 0.040\,(G - 23.8).$$

5928

T Ophiuchi

$16^h\,25^m\,27^s$ (1855.0) $-15^\circ\,49'.2$

Max. = 2 400 507^d (6. Apr. 1860) + 361^d E?

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	7.6	7.5	$-1^m\,5^s$	+ 9'.1		13	94	10.1		$-0^m\,56^s$	+ 3'.0	
2	20	8.1	8.2	+1 38	− 8.3		14	98	10.2	9.9	+1 26	−21.3	
3	51	9.0	9.3	+1 33	+15.0		15	106	10.5		+1 4	+11.7	
4	55	9.1	9.2	−0 34	+17.4		16	110	10.6		−1 43	+21.6	
5	59	9.2	9.2	−1 40	+21.6		17	111	10.6		−0 7	− 3.2	Ch. 10^M
6	64	9.3	9.5	+0 44	− 5.4		18	119	10.8		−0 29	−14.1	
7	69	9.5	9.5	+1 23	− 5.7		19	122	10.9		+0 27	− 4.5	
8	75	9.6		−0 46	+12.9		20	124	10.9		−0 49	+10.2	
9	79	9.7	9.7	−1 57	+19.2		21	133	11.2		+0 23	+ 3.9	
10	84	9.8	9.6	+0 3	− 8.3								
11	89	10.0		−1 3	− 0.1								
12	93	10.1		+0 21	+ 9.2								

$M = 9.2 + 0.027\,(G - 59.6)$.

7234

R Capricorni

$20^h\,3^m\,10^s$ (1855.0) **$-14^\circ\,41'.6$**

Max. = $2\,400\,391^d$ (12. Dec. 1859) + 345^d E?

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.2	8.2	$+1^m\,30^s$	+29'.0		23	58	10.7		$-0^m\,28^s$	− 3'.0	
2	5	8.4	8 5	+0 12	+29.3		24	58	10.7		+0 44	+ 9.6	
3	7	8.6	8.8	−1 32	− 0.3		25	61	10.8		−0 6	+ 6.6	
4	16	8.9	9.0	−1 43	− 0.6		26	63	10.9		−0 46	+ 8.7	
5	24	9.2	9.1	−0 16	−27.0		27	64	10.9		+0 30	− 1.8	
6	27	9.4	9.4	+1 20	− 9.9		28	66	11.0		−0 41	+15.0	
7	28	9.4	9.5	+1 5	+ 7.8		29	67	11.1		+1 1	−10.8	
8	36	9.8	9.8	−1 39	+22.8		30	68	11.1		−0 48	+11.4	
9	36	9.8	9.8	+0 15	− 8.1		31	71	11.2		+0 45	−11.1	
10	38	9.9	9.8	−1 32	−26.0		32	74	11.4		−0 50	− 8.8	
11	39	9.9		−1 36	+15.9		33	74	11.4		+0 5	+ 2.4	
12	41	10.0	10	−1 0	− 0.3		34	75	11.4		+1 2	− 8.1	
13	41	10.0	10	−0 40	+ 3.6		35	76	11.5		−0 26	+12.3	
14	42	10.0	9.8	−0 44	− 3.0	BD. =46'.1	36	79	11.6		+0 33	− 3.9	
15	43	10.1		−0 59	+11.1		37	81	11.7		−0 37	+ 4.5	
16	44	10.1		+0 58	+ 1.2		38	81	11.7		−0 38	−13.8	
17	45	10.2		−1 25	+24.2		39	81	11.7		+0 24	+ 6.9	
18	45	10.2	10	−1 16	+15.6		40	84	11.8		+0 43	+ 6.9	
19	45	10.2	9.8	−0 17	−16.8		41	84	11.8		−0 10	0.0	
20	49	10.3		−1 0	+20.4		42	89	12.0		+0 21	+ 6.0	
21	49	10.3		+0 42	− 9.6		43	91	12.1		+0 13	−13.2	
22	53	10.5		+0 35	− 0.9								

Sch. 13^M, dist. 20″, ang. 355°, invisib.

$$M = 9.1 + 0.042\ (G - 20.1).$$

5249

V Librae

$14^h\,32^m\,18^s$ (1855.0) $-17^0\,1'.8$

Max. = 2408566^d (30. Apr. 1882) + 360^d E?

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.1	7.8	$-0^m\,59^s$	−13′.2		26	52	10.6		$+0^m\,27^s$	− 5′.1	
2	4	8.3	8.3	+1 53	− 9.9		27	52	10.6	9.9	+1 47	− 8.1	
3	5	8.3	8.6	−0 22	+12.6		28	54	10.8		+0 22	+ 5.1	
4	8	8.5	8.5	−1 53	−12.9		29	55	10.8		−0 32	−14.4	
5	11	8.6	8.5	+0 10	− 6.9		30	58	11.0		+0 47	+11.7	
6	15	8.8	8.9	−1 8	− 3.9		31	60	11.0		+0 22	− 8.1	
7	17	8.9	8.9	+1 27	+23.2		32	60	11.1		−0 46	− 5.4	
8	18	9.0	9.1	+0 26	−18.6		33	63	11.2		−1 7	+ 8.4	
9	20	9.1	9.3	−1 46	+23.1		34	63	11.2		+0 41	+13.5	
10	20	9.1	9.5	−1 30	+18.6		35	67	11.4		+0 24	−12.3	
11	23	9.2	9.4	+1 44	−29.5		36	67	11.4		−1 1	− 5.1	
12	24	9.3	9.3	−1 33	−24.0		37	69	11.5		−0 33	+ 5.4	
13	27	9.4	9.5	−0 54	+ 5.4		38	69	11.5		+0 49	+ 7.8	
14	29	9.5	9.6	+1 25	−22.0		39	71	11.6		−0 30	− 3.6	
15	32	9.6	9.8	−1 48	+ 6.6		40	72	11.6		−0 32	+14.1	
16	35	9.8		+0 14	+ 0.6		41	74	11.7		−0 58	+ 8.1	
17	38	9.9		−0 4	+13.2		42	74	11.7		−0 3	−12.0	
18	41	10.1		+0 33	+ 0.3		43	75	11.8		−0 13	− 9.0	
19	41	10.1		+0 47	+ 5.2		44	76	11.8		+0 9	−11.7	
20	43	10.2	10	+0 9	−25.8		45	77	11.9		−0 36	+ 6.4	
21	45	10.3		+0 19	+15.0		46	79	11.9		−0 11	− 9.9	
22	47	10.4	9.9	+0 12	−29.1		47	79	12.0		−0 28	+11.4	
23	48	10.5	9.5	−0 58	−13.0								
24	49	10.5		+0 47	− 3.3								
25	49	10.5		+0 50	−11.1								

$$M = 9.1 + 0.049\ (G - 20.5).$$

5704

RR Librae

$15^h\,48^m\,4^s$ (1855.0) $-17°\,52'.6$

Max. = 2409710^d (17. Jun. 1885) + 277^d.0 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.1	8.0	$-0^m\,33^s$	+16'.8		26	53	10.7		$-1^m\,0^s$	−14'.7	
2	4	8.3	8.6	−0 47	−29.3		27	57	10.9		+0 44	− 9.0	
3	7	8.4	8.7	−0 24	+25.8		28	58	11.0		−0 56	− 8.5	
4	9	8.5	8.7	−0 21	+ 2.8		29	60	11.0		−0 28	−14.7	
5	17	8.9	9.0	−0 14	− 2.2		30	60	11.0		−0 47	+ 6.6	
6	19	9.0	9.2	−0 6	−18.3		31	61	11.1		+0 45	−13.8	
7	24	9.3	9.1	−1 38	−12.3		32	62	11.1		−0 44	− 2.7	
8	25	9.4	9.0	+1 58	−10.5		33	62	11.2		+1 0	+ 1.5	
9	28	9.5	9.7	+0 4	−17.7		34	63	11.2		−0 40	+12.6	
10	30	9.6	9.3	+1 56	−19.5		35	64	11.2		−1 4	−14.4	
11	32	9.7	9.8	−1 32	− 8.7		36	66	11.3		+0 33	− 4.2	
12	33	9.7		+0 37	− 5.4		37	66	11.4		−0 32	+ 8.7	
13	33	9.7	9.6	+1 5	+ 0.6		38	67	11.4		−0 47	− 7.5	
14	34	9.8	9.8	−0 1	+12.1		39	69	11.5		+0 9	+ 4.5	
15	34	9.8	10	+0 23	−29.0		40	75	11.8		−0 47	− 6.3	
16	38	10.0	9.9	+0 44	+21.0		41	75	11.8		+0 18	− 1.8	
17	39	10.0		−1 4	− 3.0		42	80	12.0		+0 51	−14.4	
18	40	10.1		−0 41	− 0.9		43	81	12.1		+0 19	− 6.3	
19	41	10.1	10	−0 4	+ 8.7		44	82	12.1		+0 41	−12.0	
20	43	10.2		−0 38	−14.7		45	84	12.2		+0 44	− 5.4	
21	43	10.2	10	−0 57	− 5.8		46	85	12.3		+0 6	− 6.6	
22	44	10.3	10	−0 14	+ 7.2								
23	45	10.3		+0 4	+13.8								
24	50	10.6		0 0	−13.8								
25	53	10.7		−0 5	− 3.3								

M = 9.1 + 0.049 (G − 20.3).

7455

U Capricorni

$20^h\,40^m\,4^s$ (1855.0) $-15°\,18'.8$

Max. = 2 399 573^d.5 (15. Sept. 1857) + 202^d.5 E + 20^d sin (5° E + 285°).

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.6	8.5	+0^m 19^s	− 6'.9		26	45	10.5		+1^m 3^s	− 8'.7	
2	4	8.7	8.7	+1 0	− 6.6		27	47	10.6		−0 19	− 3.9	
3	6	8.8	8.8	−1 0	+13.2		28	49	10.6		−0 39	+ 4.8	
4	7	8.8	9.0	+0 56	+17.7		29	49	10.7		+0 11	+ 7.2	
5	9	9.0	9.1	−1 58	+ 3.5		30	50	10.7		−0 34	− 3.6	
6	10	9.0	9.2	−2 8	+ 3.9		31	52	10 8		+0 28	+ 7.2	
7	14	9.2	9.1	+1 1	+14.4		32	53	10.8		−0 31	−10.5	
8	14	9.2	9.2	−0 31	+ 6.9		33	54	10.9		−0 10	+ 9.3	
9	15	9.2	9.1	−1 16	−10.5		34	54	10.9		+0 22	+14.4	
10	15	9.2	9.0	+1 12	−28.1		35	57	11.0		−0 2	− 4.8	
11	16	9.2	9.4	+1 34	+21.9		36	57	11 0		+0 24	+ 9.9	
12	20	9.4	10	+1 16	+ 7.2		37	57	11.0		−0 48	+ 9.3	
13	21	9.5	9.4	+0 53	−24.6		38	61	11.2		−0 37	+ 7.5	
14	22	9.5	9.6	+0 35	− 0.9		39	62	11.2		+0 11	+14.7	
15	23	9.5	9.5	−1 39	−18.9		40	63	11.2		+0 18	− 3.6	
16	26	9.7	9.6	−0 32	+22.2		41	63	11.3		−0 17	−10.2	
17	29	9.8	9.5	−0 44	− 9.3		42	65	11.3		−0 21	− 3.0	
18	30	9.9	9.8	−1 30	+15.0		43	66	11.4		+0 42	+ 9.6	
19	34	10.0		+0 35	− 6.3		44	67	11.4		−0 33	−11.4	
20	35	10.1		+0 59	−14.4		45	67	11.4		+0 7	− 2.2	
21	37	10.1	9.5	−1 45	−29.9		46	68	11.5		+1 4	0.0	
22	41	10.3		−0 39	+15.0		47	73	11.7		+0 2	− 3.9	
23	41	10.3		−0 15	− 3.9	Ch. 10^M (?)	48	73	11.7		+0 28	− 2.4	
24	43	10.4		+0 39	0.0								
25	45	10.5		−0 59	+ 2.7								

M = 9.1 + 0.043 (G − 12.7).

7659

T Capricorni

$21^h\,14^m\,0^s$ (1855.0) $-15^0\,46'.4$

Max. = 2 398 878^d (21. Oct. 1855) + 269^d.2 E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0	8.1	8.0	$-0^m\,31^s$	+ 0'.6		18	53	10.4		$+0^m\,52^s$	- 5'.7	
2	4	8.2	8.0	+0 16	+14.4		19	55	10.5		−1 17	+ 7.5	
3	12	8.6	8.8	+1 11	+20.4		20	55	10.5		−1 17	+ 6.6	
4	12	8.6	8.9	+1 34	+ 7.5		21	56	10.5		+0 42	−12.2	
5	16	8.8	9.0	−0 5	+ 4.4		22	56	10.6		−1 3	+ 1.2	
6	22	9.0	9.3	+0 33	+23.6		23	59	10.7		−0 15	+ 7.2	
7	28	9.3	9.3	+0 5	+14.1		24	62	10.8		+0 43	- 4.4	
8	30	9.4	9.5	+0 54	- 9.3		25	62	10.8		+0 10	- 6.1	
9	35	9.6	9.5	+0 43	+ 6.5		26	65	11.0		−0 43	+12.9	
10	37	9.7	9.5	+0 56	+15.6		27	66	11.0		−0 47	- 4.2	
11	38	9.8	9.5	+1 22	+19.5		28	68	11.1		+0 36	+ 9.9	
12	40	9.8	9.5	−1 7	−12.2		29	70	11.2		+0 22	- 4.8	
13	41	9.9	9.5	+0 55	+12.6		30	75	11.4		−0 12	+ 1.8	
14	44	10.0	9.5	+1 35	+18.0		31	78	11.5		−1 0	- 3.6	
15	45	10.1	10	+0 31	- 0.6		32	79	11.6		+0 25	- 4.5	
16	49	10 2		−0 13	+11.7								
17	50	10.3		−0 54	- 6.9								

M = 9.0 + 0.044 (G − 20.9).

T Sagittarii

$19^h\ 7^m\ 52^s$ (1855.0) $-17°\ 13'.2$

Max. = 2 413 384^d (9. Jul. 1895) + 384^d E.

Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae	Num.	Gradus	Magn.	BD.	$\Delta\alpha$	$\Delta\delta$	Notae
1	0		6.8	$-1^m 25^s$	−22′.1		38	44	10.3	9.5	$-1^m\ 8^s$	−16′.2	Duplex.
2	7	7.9	7.8	+0 6	+24.2		39	45	10.4		+0 10	+ 0.3	Ch. $11^M.5$.
3	7	7.9	7.8	+1 37	+ 2.7		40	46	10.5		−0 52	+ 9.9	
4	11	8.1	8.2	+0 49	− 5.1		41	46	10.5		−0 20	− 9.4	
5	13	8.3	9.0	+0 36	+21.8		42	47	10.5		+0 38	− 3.9	*
6	14	8.4	8.9	−0 16	+21.0		43	48	10.6		+0 20	+ 7.2	
7	17	8.5	8.8	−0 41	+ 6.6		44	51	10.8	9.5	+1 21	−29.0	
8	20	8.7	9.0	−1 31	− 2.5		45	51	10.8		−0 20	+14.1	
9	20	8.7	9.2	+0 33	+23.3		46	51	10.8		+0 56	+ 8.7	
10	22	8.8	9.0	−0 11	−23.0		47	52	10.9		−0 9	+ 5.4	
11	23	8.9	9.0	−0 18	− 6.7		48	54	11.0		+0 40	− 9.6	
12	26	9.1	9.8	+1 15	+24.5		49	56	11.1		+0 41	+13.5	
13	27	9.2	9.1	+0 25	−29.9		50	56	11.1		−0 45	+12.6	
14	28	9.3	9.1	+0 4	−22.0		51	56	11.1		−0 46	−10.8	
15	29	9.3	9.1	−0 12	−15.1		52	56	11.1		−0 14	+ 5.1	
16	30	9.4	9.2	−0 5	+ 8.1		53	57	11.2		−0 37	−11.4	Duplex.
17	30	9.4	9.3	+0 51	− 9.3		54	58	11.2		−0 49	+ 7.2	
18	30	9.4	9.3	+0 11	+20.6		55	58	11.2		−0 48	+ 0.6	
19	31	9.5	9.3	+1 17	+ 3.6		56	58	11.2		+0 53	+ 3.3	
20	33	9.6	10	+0 31	+25.1		57	58	11.2		−0 21	+ 8.1	
21	33	9.6	9.6	+1 26	+21.2		58	58	11.2		−0 37	−14.4	
22	34	9.6	9.5	−1 58	− 3.0		59	61	11.4		+0 9	−12.1	Duplex.
23	34	9.6	9.2	−0 31	−27.2		60	61	11.4		−0 16	− 9.6	
24	34	9.7	9.8	+1 7	+ 4.3		61	61	11.4		−0 21	+11.1	
25	36	9.8	9.4	+1 29	−18.0		62	62	11.5		+0 10	− 2.4	
26	36	9.8	9.8	+1 59	+29.0		63	64	11.7		−0 37	− 1.5	
27	37	9.8	9.5	+1 27	−24.2		64	66	11.8		+0 4	+ 7.5	
28	37	9.8		−0 48	− 2.1		65	69	12.0		−0 12	− 3.9	
29	37	9.9		+1 31	−20.1		66	70	12.0		−0 30	− 0.6	
30	37	9.9		+0 16	+12.4		67	70	12.1		+0 21	− 4.5	
31	37	9.9	9.5	+0 51	− 1.9		68	71	12.1		+0 40	− 1.8	
32	38	9.9	9.3	−1 40	−29.9		69	71	12.1		+0 7	+ 4.8	
33	40	10.0	9.5	−1 6	+ 0.6		70	74	12.3		+0 39	− 1.2	
34	40	10.1		+0 40	− 3.6	*	71	74	12.3		+0 23	− 3.0	
35	41	10.1		+0 22	+ 3.7		72	74	12.3		−0 3	− 6.0	
36	41	10.1	9.5	+0 21	− 6.4		73	74	12.3		−0 27	− 0.9	
37	41	10.1	9.3	+1 59	−25.1	Duplex.	74	74	12.3		−0 28	− 2.7	

* ½ (34 + 42) = BD − 17°.5554, $9^M.2$.

$$M = 9.3 + 0.066\ (G - 28.6).$$